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LETTER FROM BARON VON LIEBIG TO J. J. MECHI.

In our March number we alluded to the following letter and the remarkable prediction it contains, and now gladly give it a place in the *Valley Farmer;* not so much as we before said, on account of the practical importance of the answer to the direct question of Mr. Mechi, which called it forth, as of the great and leading principle involved, which is important to every farmer, whether in England or on the new prairies of the United States.

MUNICH, Thursday, Nov. 17, 1859.

DEAR SIR: Your letter of the 7th of November to the *Times*, furnishes me an occasion to express to you my sincere thanks for the views to which you there give utterance, and which I have labored many years to impress. I am sorry not to be able to say that my efforts have been attended with any perceptible results, and I regard it as a fortunate event that a man of so eminently practical a character as yourself has now, for the first time, in the interest of agriculture and the national welfare, taken up the question of the "sewerage of towns" with warmth, and in language adapted to produce conviction.

It is my ardent wish that you may succeed in awakening the English people to your own convictions; for in that case the ways and means for setting aside the difficulties which stand in the way of procuring manure from the "sewerage of towns" will certainly be found, and a future generation will look upon those men who have devoted their energies to the attainment of this end, as the greatest benefactors of their country.

The ground of my small success lies clearly in the fact, that the majority of farmers do not know the extent to which their own interests are concerned in this matter, and because the views and conceptions of most men in regard to the circuit of life and the laws of the preservation of our race, do not generally rise above those of C. Fourier, the inventor of the phalanstery. He proposed, as you know, to supply the wants of the occupants of his phalanstery by means of eggs. He supposed it was only necessary to procure a couple of hundred thousand hens, each of which would lay thirty-six eggs a year, making as many millions of eggs, which, sold in England, would produce an immense income. Fourier knew very well that hens lay eggs, but he seemed not to know that in order to lay an egg they must eat an amount of corn its equal in weight. And so most men do not know that the fields, in order permanently to yield their harvests, must either contain, or else receive from the hands of man, certain conditions which stand in the same relation to the products of the field as the hen's food does to the egg she lays. They think that diligent tillage and good weather are sufficient to produce a harvest; they therefore regard this question as one in which they are wholly unconcerned, and look forward carelessly and with indifference to the future.

As physicians, who in the apparent signs of a young man's blooming health, discern the fatal worm which threatens to undermine his organic frame, so in this case should those discerning men, who are capable of comprehend-

ing the range of the question, raise earlier the voice of warning.

It is true that the diligent tillage of the fields, sunshine and timely rain, are the outward conditions, perceptible to all men, of good harvests; but these are perfectly without effect upon the productiveness of the field, unless certain things not so easy of perception by the senses are present in the soil: and these are the elements which serve for nourishment—for the production of roots, leaves and seeds—and which are present in the soil always in very small quantity in proportion to the mass of the soil itself.

These elements are taken from the soil in the products of the field, in the corn, or in the flesh of the animals nourished by these products; and daily experience shows, that even the most fruitful field ceases after a certain series of harvests to produce these crops.

A child can comprehend that, under these circumstances, a very productive field, in order to remain *very* productive, or even simply productive, must have the elements, which had been withdrawn in the harvests, perfectly restored; that the aggregate of the conditions must remain, in order to produce the aggregate results; and that a well, however deep it may be, which receives no supply of water, must in the end become empty, if its water is constantly pumped out. Our fields are like this well of water. For centuries those elements which are indispensable to the reproduction of the field crops, have been taken from the soil in those crops, and that, too, without being restored. It has only recently been ascertained how small a supply of these elements the soil really has. A beginning has been made to restore to the fields the loss which they sustain through the annual harvests, by introducing from external sources manures containing the same elements. Only a very few of the better informed farmers perceive the necessity of this restoration, and those of them who have the means have zealously endeavored to increase the amount of these elements in their fields: but by far the greater part of them know nothing of such restoration—they think that they may continue to take from the field as long as there is anything left, and that it will be time enough to provide for this necessity when it knocks at their doors. They do not of course know how large their stock on hand is, nor are they aware that when the necessity shows itself, there will then be no means to meet it. They know not, that what they have wasted is irretrievable.

The loss of these elements is brought about by the "sewerage system of towns." Of all the elements of the fields, which, in their products in the shape of corn and meat, are carried into the cities and there consumed, nothing, or as good as nothing, returns to the fields. It is clear that if these elements were collected without loss, and every year restored to the fields, they would then retain the power to furnish every year to the cities the same quantity of corn and meat; and it is equally clear that if the fields do not receive back these elements, agriculture must gradually cease. In regard to the utility of the avails of the "sewerage of towns" as manures, no agriculturist, and scarcely an intelligent man, has any doubt; but as to their necessity, opinions are very various.

Many are of the opinion that corn, meat and manures are wares, which, like other wares, can be purchased in the market; that with the demand the price may perhaps rise; but this will also stimulate the production, and that all turns upon having the means to purchase: and so long as England has coal and iron she can exchange the products of her industry for the corn, meat and manure which she has not. In this respect I think it would be wise not to be too confident of the future, for the time may perhaps come, even in half a century, that not one of these countries upon whose excess England has hitherto drawn, will be able to supply her with corn, and that too from the natural law, that what is true of the smallest piece of ground is also true of a great country—it ceases to produce corn if the conditions of the reproduction of the corn which have been carried off are not restored to it. Nor, furthermore, is it certain whether the corn-growing lands will always desire to exchange their corn for the products of English industry, since they may no longer need those products, or at least not in the ratio of England's need of corn. In the countries of Europe, and in the United States of North America, great efforts are made to become in this respect independent of England, as being in the end the only way of keeping up the corn prices in these countries, so as to repay the labor of the people.

In the United States the population increases at a still greater ratio than in other countries, while the corn production upon the land under cultivation has constantly fallen off.

History teaches that not one of all those countries which have produced corn for other lands have remained corn markets, and England has contributed her full share towards rendering unproductive the best lands of the United States, which have supplied her with corn, precisely as old Rome robbed Sardinia, Sicily and the rich lands of the African coast of their fertility.

Finally, it is impossible in civilized countries to raise the corn production beyond a certain limit, and this limit has become so narrow that our fields are no longer capable of a higher yield without an increase of their effective elements by the introduction of manures from abroad. By means of the application of guano and bones, the farmer of most limited capacity learns the real meaning of such increase; he learns that the pure system of stall or home-made manures is a true and genuine robbing system. In consequence of his restoring in the guano and bones (but a small portion of the very same elements of seeds and of fodder which had been withdrawn from his fields by centuries of cultivation), their products are wonderfully increased. Experiments instituted with special reference to this end in six different parts of the Kingdom of Saxony, showed that each hundred weight of guano put upon a field produced 150 lbs. of wheat, 400 lbs of potatoes, and 280 lbs. of clover, more than was produced by the same sized piece of ground without guano; and from

this it may be calculated how enormously the corn and flesh production of Europe has been increased by the yearly importation of 100,000 tons, or 2,000,000 cwt. of guano.

The effect of guano and bones should have taught the farmer the real and only cause of the exhaustion of his fields; it should have brought him to perceive in what a condition of fertility he might have preserved his fields, if the elements of the guano which he has transported in the shape of meat and products of his fields into the cities, were recovered and brought into a form which would admit of their being restored every year to his fields.

To an understanding of this, however, the farmer has not yet come; for, as his forefathers believed that the soil of their fields was inexhaustible, so the farmer of the present day believes that the introduction of manures from abroad will have no end. It is much simpler, he thinks to buy guano and bones, than to collect their elements from the sewers of cities, and if a lack of the former should ever arise, it will then be time enough to think of a resort to the latter. But of all the farmer's erroneous opinions, this is the most dangerous and fatal.

[To be Concluded in our Next.]

MANURE—HOW APPLIED.

There are a diversity of opinions entertained in regard to the best mode of applying stable manure to land. The early writers in this country, and among them Judge Buell, the founder of the *Albany Cultivator*, claimed that the only proper mode of applying manure was to spread it upon the surface and plow it under immediately, so that the volatile portions might not be lost in the atmosphere, but be at once absorbed by the soil. They also contended that manure in its long or unfermented state was best, and should be applied and plowed under for hoed crops, during the cultivation and growth of which it would become decomposed and reduced to the best condition in the soil for the succeeding grain crops. So fearful were these farmers (of the old school), that the manure would sustain loss by the escape of ammonia, that they would haul it out only so fast as it could be spread and plowed under on the same day. This all looked very well in theory, and we, for a long time, followed it in practice. Later experience, however, of the best chemists and most observing farmers has clearly demonstrated that under ordinary temperatures very little ammonia is given off by manure when spread upon the surface. These observations have also proved that manure in a fine, well-rotted state is best; that decomposition must have so far advanced that the substance of the manure will readily be given off in solution with each returning shower to the roots of the growing crop.

In ordinary farm culture it is undoubtedly best to apply manure in the fall as a top dressing to grass and clover, where these crops are to be turned under for corn, wheat or potatoes. Manure thus applied greatly increases the growth of grass, yielding a good crop for pasturage or hay, leaving a largely increased amount of vegetable matter in the roots, &c. of the grass, to be plowed under as manure for the subsequent crops.

Land under constant cultivation, as in garden vegetables, &c. requires to be manured in a different manner. The best mode of manuring such land is to apply it to the surface in a finely divided state, and incorporate it with the soil by shallow plowing or with the harrow. If manure is covered deep, on light sandy soils, all its enriching qualities filter through the soil and are soon lost to the crop. On more heavy, stiff soils, manure applied and mixed near the surface, proves highly advantageous, not only by enriching the soil, and thus promoting the growth of the crop, but it renders the surface more open and porous, admitting the air and heat to the roots of the plants, as well as giving off to them, in solution, with each succeeding rain, their enriching properties.

The value of manure is often greatly impaired while it remains in the yard, or under the eaves of the sheds and stables, where the most valuable portions are washed out and carried off in the form of drainage. Yards and stables should be so arranged that the water from the roofs could be carried off in another direction, if not required to fill cisterns for the use of the stock.

An Investment which will Pay 1500 per cent. a Year.

Eds. Valley Farmer:—

I have a gate, hung in the ordinary manner, which I think is opened at least fifty times each day. Now, I have had the curiosity to estimate the amount of time consumed yearly in the operation. Fifty times per day, at ½ minute each time, will make 25 minutes daily; which, multiplied by 365, will amount to 9125 minutes—that is, 152 hours, or 12½ days. Computing 12 hours for each day, during which the gate would probably be in use, I have also had the curiosity to inquire what the hangings for a self-closing gate would cost—and find 40 cents will buy one set.

12½ days, at 50 cents per day (a very small estimate), would amount to $6.25, or over 1500 per cent in one year on the investment. Again, such hangings would probably last 10 years, and would consequently save in time alone during said 10 years, one hundred and twenty-five days: which would, at 50 cents per day, amount to the snug sum of $62.50; not to mention the certainty of keeping cattle, hogs, poultry, &c. &c. in their proper places, and the saving consequent thereon. W———.

LUCERNE, ORCHARD GRASS, RYE AND CARROTS.

EDS. VALLEY FARMER:—I propose to speak to the farmers of Missouri of the merits of the four articles of food, for the horse and cow, which stand at the head of this communication. The season will soon arrive when an opportunity will offer to test the value of each variety named; and I have no doubt, when once cultivated, each individual who makes the trial, will become as ardent an advocate for the culture of lucerne, orchard grass and carrots, as your humble correspondent. I speak from my own experience and observation, having had more than thirty years practice in the culture of each article, at different periods during that time; and as I write for the young and inexperienced, I shall go more into detail than would be necessary when addressing others familiar with the habits and character of the plants.

Lucerne is a native of France, from whence most of the seed is imported, and is called French clover. It thrives best in a deep, rich, rather sandy soil; but I have known heavy crops taken from soils of a different character, where the soil was sufficiently dry and rich. In fact, I have never seen a piece of ground too rich; as the more luxuriant it grows the oftener it is ready to cut down. Its greatest value is for soiling—by cutting it as it is wanted for feeding green to horses, cattle or hogs. When fed to horses or cows, in the early part of spring, it is better to cut a few hours before feeding. Like clover, it will produce Haven or swelling in cattle, and colic in horses, if fed in a wet state. *Too great caution cannot be observed in feeding green clover or lucerne or other grasses to cattle in early spring, more especially when wet with dew or rain.*

Every animal eats it with the greatest avidity; but I prefer it to all other grasses for soiling, because it *never salivates the horse*, and can be cut from the 20th of May to October, and is always healthy for horses when judiciously fed. All other grasses, within my knowledge, will salivate the horse in wet seasons; but I have never known a single instance where lucerne has produced the same effect on the horse. When the milch cow leaves the pasture, a feed at night with lucerne is always relished, and richly pays for the little trouble of cutting and feeding as it is wanted. It is better to have the field or lot of lucerne, located near the barn or place of feeding. Boys twelve years old, ought to learn to cut or mow all grasses. It is best to provide a short strong scythe for common use, as the slender grass scythe is liable to be broken by inexperienced hands. A good bramble scythe, two feet or two and a half feet long, I always found the most serviceable. Make it a rule to keep the scythe sharp, and frequently wash the gum off the blade, which accumulates every day or two. The closer the lucerne is cut, not to injure the crown of the plant, and the sharper the scythe, the quicker will be the after-growth. When the lucerne is from twelve to fifteen inches high, it will do to commence feeding; and in five or six weeks where it was first cut, it will do to cut again; and if seasonable it will do to cut from three to five times during the season, according as the summer is warm and seasonable. When the supply is greater than the consumption, and the lucerne is full of blossoms, it ought all to be cut down and cured for hay like clover. It does not require so much spreading as clover, the stem and leaves being smaller than clover, do not contain so much moisture. One acre of lucerne will feed from four to six cows or horses, from May to October. I would advise every owner of a horse and cow, if he has but one acre of land, to put one-eighth or one-fourth of an acre in lucerne. In the absence of flowers and shrubbery in the garden, I have known the borders and vacant spots to be filled with lucerne, so that the noble horse or the docile cow, could occasionally receive from the master's hand a delicious bite of that most valuable grass. Lucerne is as hardy as red clover, the seed resembles clover seed, but are nearly twice the size. It is a deep rooted perennial plant, the roots often penetrating the soil to the depth of two and three feet. It grows rapidly sending up slender shoots from two to three feet in hight, and bears a purple blossom, with the seed in spiral pods, several seeds in one pod. Under favorable circumstances it will stand from ten to fifteen years without re-seeding. It may become foul with weeds or grass, so as to retard its growth, in such a case, it is better to commence in time, and prepare another suitable piece of ground by heavy manuring and deep plowing, and cultivate some hoed crop where no weeds are permitted to ripen its seed. The preparing of the ground is, perhaps, the greatest trouble; but the benefits derived for several years afterwards, will richly remunerate the farmer for all of his extra labor.

In preparing the ground, my practice was to plow as deep as possible with a double horse plow, and fallow with a small single horse plow in the same furrow, which would break the ground from twelve to fourteen inches deep. With a sub-soil plow a greater depth can be obtained; but I always succeeded with my manner of deepening the soil, and would recommend others to try the same plan, when the sub-soil plow cannot be had.

Lucerne is sometimes sown in drills from twelve to eighteen inches between rows. I would only advise this plan where the ground is foul and the lot small, as few farmers have the extra time to spare in hoeing the crop. It is much less trouble to prepare a piece of ground in the most thorough manner and sow broad cast. The quantity of seed per acre, is from sixteen to twenty pounds; I prefer the latter quantity as the lucerne is not so liable to be overrun with weeds where it is thick, and the stock is more tender. As before stated, the seed is mostly imported from France—will cost from thirty to thirty-three cents per pound by the quantity, and can be bought by the small quantity, for 40 to 50 cents per pound. It is *always the surest plan to buy seed from some responsible seed store* to insure fresh seed, as disappointments in getting good, fresh, clean seed, often discourages young beginners, and retards the introduction of val-

uable plants to the farming community. The time for sowing the seed is about the first of May, or as soon thereafter as the season will admit. It has been recommended by some writers, to sow a small quantity of rye, from one-fourth to one-half bushel per acre. I have succeeded without any admixture of seeds of any kind. I once sowed half an acre in August, and succeeded in getting a good stand; in that case, I have no doubt the rye would have been a good protection through the winter. I again repeat the declaration, that, I prefer lucerne to any other grass for feeding in a green state, or, as it is generally termed soiling. It is not suited for grazing—and never having tested its qualities for making hay on a large scale, I cannot speak from my own observations; all that is necessary, is to keep stock of all kinds off of it, both winter and summer, and occasionally if it should require it, give it a dressing of fine rotten manure in the fall or winter—the manure made into compost through the summer and fall. Using the precaution to destroy all weeds and grass before going to seed will prevent the lucerne from being overrun with weeds. It is recommended by some writers to harrow lucerne in the spring; but if all stock is kept off the ground is not liable to become packed, as the frosts of winter will lighten the soil, and the constant shade from the rapid growth of the lucerne will keep the ground shaded; consequently it is not liable to become close and hard, as when exposed to the sun and wind. The harrow can be used if the ground becomes packed and the field foul with grass or weeds.

Orchard grass, as its name implies, is a good grass for shady grounds. It is also called, Cocksfoot; its botanical name *Dactylis Glomeratæ;* it is better known as Orchard Grass, and is said to be a native of the United States. This fact alone should have entitled it to greater consideration than it has received from the cultivators of the soil. It is naturally adapted to a dry, sandy soil, and is thereby better adapted to stand the long droughts and hot suns peculiar to our climate. It is the earliest, and the latest pasture grass known; when sowed with clover, it is always preferred to the clover by the cows in early spring. I have no recollection of any test with Timothy or blue-grass, but from my knowledge of the superior value of orchard grass for early pasture, I have every confidence that it will bear a favorable comparison with any other grass within my knowledge. When permitted to ripen its seed, the stock becomes harsh and course, and loses much of its nutritive qualities; it is about equal in quality to full ripe millet for hay. When sowed with clover it prevents clover from falling; and when cut before ripening its seed, it is an addition to clover hay. As the clover dies out the second year, the orchard grass takes entire possession of the field, and, if occasionally dressed with manure, it will continue for fifteen or twenty years without re-seeding. It has many warm friends, but has never been extensively cultivated by farmers, but for what reason I do not know, excepting that few fields are kept for pasture more than three or four years without breaking up.

It has been asserted, that it yields more pasture than any other grass; this may be true in sandy soils, and it may prove true in the soil of Missouri; but, I have been of a different opinion, and have thought a greater yield of Timothy or clover could be taken from the same character of soil, from the fact, that orchard grass generally grows in tufts or bunches, which leaves many vacant spaces between the tufts; but admitting it will not yield as much hay or as good, it is superior in other respects, and every farmer should have a pasture for his milch cows well set with orchard grass. It is advisable, when the grass is eaten off very close, to give it rest for eight or ten days, when its rapid growth will enable the grazing to be resumed with profit to the stock and the master.

One of the greatest difficulties, is in getting the pasture well set with grass, which arises generally from one of two causes, and perhaps from both, to-wit: Imperfect seed, and too small a quantity. The seed is often imperfect from two causes, the first is, the farmer wants to secure a good crop of hay and seed, consequently he cuts the grass before all the seed is ripe; the second reason is, old seed which at first was nothing extra. A bushel of seed is estimated to weigh from twelve to fourteen pounds, they are very light and chaffy, and ought to be sold rather by weight than by the bushel, since, by measure, it leaves a great opening for fraud. It is recommended to sow two bushels per acre with six or eight pounds of clover seed. I would *advise two and a half bushels orchard grass and six pounds of clover seed.* To prepare the orchard grass seed for sowing, the day before you sow spread the seed upon a clean floor, and sprinkle with water to moisten, and keep the seed moist until ready to sow; as fast as the seed is sowed let the harrow follow, to cover immediately. The clover seed can be sowed either before or after the orchard grass.

After once getting a crop of grass to stand, *save your own seed,* by letting it get fully ripe before cutting. Orchard grass loses much of its value for hay by ripening the seed, but the seed which generally sells for $1 50 to 2 50 per bushel, will fully repay for the loss of the quality of the hay. The great value in orchard grass is to keep it closely cropped through the season, occasionally withdrawing the stock to enable it to get a start in growing. It resists drought, and does not suffer much by continuous rains; shade trees does not materially injure its growth, where the air or sun is not entirely excluded. It is not liable to be rooted out by other crops. When it grows into tufts, scatter the seed in vacant spots in early spring, either orchard grass seed with clover, or orchard grass alone, it will increase the value of the pasture.

When it is desired to cultivate the field in other crops, it is not difficult to get rid of orchard grass; after breaking up the sod the tufts will decay by the second year. I cannot say anything definite as to the exhausting qualities of orchard grass. I am of the opinion, however, that it does not injure the land more than any other grass where constant cropping is practiced.

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Carrots like the two preceding grasses, require rich, dry soil and clean culture to insure success. The ground should be heavily manured with well rotted barn-yard manure, plowed deep, and thoroughly pulverized, and occasionally harrowed to destroy the germ of weeds or grass that have vegetated until the time of sowing. Carrot seed is slow in vegetating, and the young plant is very tender, making a very slow growth the first few weeks. This is the most critical period with the crop, and requires careful culture to exterminate the weeds with the hoe or by pulling with the hand aided with a small iron fork, or some such instrument to enter the ground, and by pressing the thumb on the weed and iron, the weed can be pulled without injury to the plant. For field culture the ground can be thrown into ridges two feet apart from centre to centre, and sow the seed either with a proper drill or by hand. After the plants are large enough to thin out, they ought to stand from four to six inches in the drill. The after culture, consists in keeping the ground well stirred with the plow and hoe, to keep down the growth of grass and weeds until the crop is ready to secure. Where there is a good cellar in the barn, the carrots can be dug when dry and put in the cellar; first cutting off the tops close, have them packed close and covered with earth or sand, to prevent shrinkage and shriveling, as well as freezing. Carrots well secured, can be fed to horses and milch cows during the winter and spring, and, I venture to say, there is no root of equal value as feed for the horse and cow. The horse will leave all other food for carrots, and there is no root so healthy or nourishing for the horse. It is equally valuable as food for the milch cow, it is the only succulent food, excepting the Irish and sweet potato, and pumpkin, that does not impart unpleasant flavor to milk and butter; and when fed regularly, the cow is kept to a regular supply of milk of the richest character, during the winter and spring. For the dairy there is no superior to the carrot, and the crop is quite as certain as the Ruta Baga turnip, or sugar beet, and with very little more labor. The seeds, if saved at home, are prepared for sowing by rubbing them between the hands; first put on a pair of buckskin mits, and rub the seed until the little bur is rubbed off, they can then be sowed by drill or by hand.

The orange and yellow carrot is thought to be the best for a general crop. It is well to try other varieties, to learn which variety is best adapted to the soil and climate. For field culture, about the fifteenth of May to the first of June, is the most suitable time if the season will allow; I would recommend the first favorable opportunity after the tenth of May. It has been recommended to mix the seed with moist earth and place it in a box, stirring the earth and seed every day or two, until the seed begins to vegetate; then to prepare the ground and sow. One pound of good seed will sow an acre, but for fear of having too few, one and a half pounds should be provided. It is always best to save your own seed, and in doing so select the stocks that have the most perfect seeds, rejecting the small and imperfect. It is impossible to give such directions as will suit the climate, locality and soil of every neighborhood—experience and the judgment of the farmer must determine what course to pursue. The average yield of carrots is about five-hundred bushels to the acre; the greatest yield I ever had was a little over eight hundred bushels, they were of the deep orange and yellow carrot, mixed. I always preferred them for stock.

Rye is one of the cereals, and constitutes a very important grain, as food for man, in many parts of the world, and even in our own country. The connection, which it is intended to fill with lucerne, orchard grass and carrots, as food for the milch cow in early spring, will require but little to be said in its favor, since most of farmers understand its value in other respects. If sowed early in the fall, one bushel of good seed is sufficient. If the season is favorable in July or August, sow the rye, and depasture it with calves and sheep till frost. In the spring as soon as the rye is one and a half to two feet high, which hight it will usually attain by the fifteenth or last of April, commence cutting for the milch cow, beginning with small quantities and increasing as the health and appetite of the cow indicates, giving salt and bran; and if the green food produces the scours give the cow dry hay and less green rye. The green rye should be cut and fed until it gets too ripe, or until the orchard grass has sufficiently advanced to turn the cow to pasture, which will be from the first to the fifteenth of May, and in favorable years some weeks sooner. The point at which to leave off rye, and commence grazing the orchard grass, must be determined by surrounding circumstances.

Rye may also be acceptable to the horse, but if the supply of carrots will hold out, there is no necessity of change; as no food, at that season, is more healthy for the horse or cow. The horse can also be allowed the privilege of the orchard grass, if the supply is equal to the wants of horse and cow. As soon as the lucerne advances far enough to cut, the orchard grass can have some rest, by allowing the stock only a few hours grazing after the dew dries off. The rye, if any is left standing, is permitted to ripen its seed and secure the crop.

The orchard grass will continue to afford grazing until arrested by frost. If the lucerne is likely to fail, or will not hold out for horse and cow after the fifteenth of June, the horse should be fed alone with lucerne, as other grasses will salivate the horse, generally after the middle of June. It is a great error in farmers to allow their horses to run at the mouth after they once find the grass will salivate. Colts may not be injured so much as the work-horse. Lucerne with all of its excellent qualities, has in addition the quality of wholesome food for the horse until frost. As soon as all the green grasses, pumpkins, and such other perishable food as cannot be kept through winter is exhausted, the carrot becomes the winter food to keep the cow to her milk and the horse in health and fine condition. Believing that the foregoing illustration will fully explain the object in view, it is not deemed necessary to add any more to this

lengthy and rather prolix communication; but should any of your readers require further explanations, any intimation through the *Valley Farmer* will receive due attention.

JNO. S. STEVENSON.

HINTS TO FARMERS.

EDS. VALLEY FARMER:—There is much treasure contained in the chips and offal of wood-piles. Nothing is superior to decaying chips around fruit-trees, shrubs, and for manuring gardens. Decaying wood is an enduring source of carbonic acid to plants, forming their bodies out of the same. For mulching young orchards after planting, wood-chips are excellent. Nothing is better to make the soil light and friable. And yet you will find thousands of wood-piles in all the Western States, where the chips have not been removed since the first settlement of the country. Every farm, garden, and orchard, might now abound in fertility, had farmers valued chips and wood-ashes as they deserve. Piles of ashes in new clearings should be carefully scraped up and removed to your worn out orchards, gardens, and meadows. Farmers run to Pike's Peak and California, to forego all the sweets of home, for innumerable hardships and risks, and but too often fail in spite of the greatest diligence and hard labor; while the surest and most enduring gold mine of a grateful soil remains uncultured under their feet. Forests are wantonly destroyed, vegetable matter, as cornstalks, straw, leaves, and grass, burnt up; manures the most valuable, unused. England and Belgium, after two thousand years' culture, produce now on their lands more grain than ever before, while the average yield in the United States, is constantly decreasing. One generation here is deemed sufficient to exhaust a rich virgin soil. Urgent necessity must soon command a stop to the wretched system of pilfering the soil of all its richness.

Agriculture as a science, is known to *but very few* farmers. Clover and grass for pasturage, with sufficient cattle and sheep thereon, will restore soils on a grand scale; warm stables for Winter, with abundance of straw and hay to litter and to feed, will furnish manure to replenish the grain fields; and by all means have grass on all lands that are inclined to wash, for holding the soil. Want is the natural consequence of waste. The United States have more than once imported grain from Europe. It seems quite probable that such an anomalous state of things may happen again.

EMIL MALLINCKRODT.

St. Louis County, Dec. 15th. 1859.

BROOM CORN.

A "Prairie Farmer" wishes to be informed through the *Valley Farmer* whether broom corn can be grown successfully and profitably upon prairie soil.

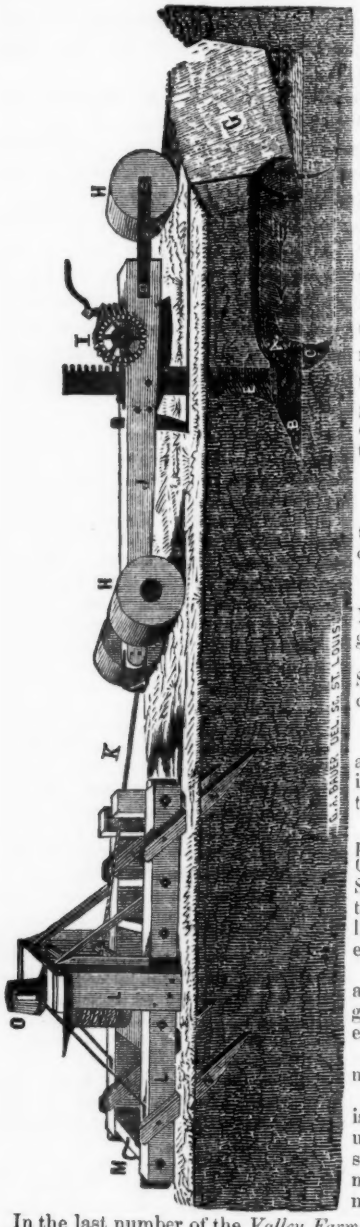
Prairie soil, generally, is well adapted to this crop; indeed, any rich, mellow soil that will yield a good crop of Indian corn will produce good broom corn. It may be grown on fresh turned prairie, as sod-corn is, or on subdued land—the latter, of course, affording the greatest yield. If sowed at the time of breaking up, the seeds should be dropped in every second or third furrow, according to the size of the plow used. The corn will vegetate and grow more rapidly, and the sod will decay sooner by running a heavy roller over the land after the plowing and planting is completed.

If the seed is planted on old ground, a good deep plowing should first be given to the land, and then thoroughly harrowed, leaving the surface well pulverized. The seed should be planted as soon as the ground has become thoroughly warmed, say from the middle of May to the first of June, never later than the 20th of May, if the season is favorable. It is best planted in drills, using an abundance of seed, which should be three feet apart. Cultivation should be commenced early. Hoe and thin out the plants when they are about four inches high, leaving the plants about, on an average, one and a half inches apart. The ground should be well cultivated, and kept free from weeds throughout the season. When the seeds begin to fill, the stalks should be bent down, say twelve or fifteen inches below the brush, taking two rows together. In a few days after this process has been performed the corn will be sufficiently ripe to harvest.—This should be done while the brush is still green, and always before frost occurs. Choose fair weather for cutting; in doing which, leave eight or ten inches length of the stalk to the brush. The corn may lay a day or two in the sun to dry, when it should be hauled in and spread upon scaffolds under sheds to cure, care being taken to spread it thin, and to turn it occasionally to prevent moulding. Six hundred pounds per acre is a good crop, but more is frequently raised. There are various methods employed for removing the seed; some use a kind of comb, others a toothed cylinder propelled by horse power, similar to a common thresher.

Whether this crop can be grown profitably or not depends upon circumstances. If grown for market it must be at some point easy of transportation where there is a demand. Or the grower must be prepared to manufacture it himself, with the same facilities for transportation and market. The cost of cultivation is about $10 per acre, more or less, according to season and the advantage taken in cultivation. From fifteen to twenty dollars may be regarded a fair profit per acre above expenses where the crop sells at the usual price.

A. HAMMOND'S DRAIN PLOW.

Patented Aug. 16, 1859.



On several occasions we have expressed our views in regard to the value of the mole plow, for the purpose of economical land draining; but we presume there are thousands of our readers who have never seen a mole plow, and who do not fully comprehend their character and mode of operation. Few subjects of late have received a greater share of the attention of the inventors of the present age than this implement, for cheap land drainage. A great number of patents have recently been granted for improvements in the mole plow. We herewith present an illustration of one that was exhibited at the last State fair of Illinois, and which received the first premium in competition wtth ten others. Mr. Hammond, the inventor, has recently obtained an additional patent for a most important improvement by which the plow is made to enter the ground at the commencement of a drain, at the required depth, and to leave it, at the will of the operator, without the necessity of digging as is the case with other mole plows.

The following is the description:

M. O. L.—Capstan and frame.

K.—Rope 2½ inches in diameter, connecting with the Mole Plow Beam and Rollers—by which they are drawn.

H. H. J.—Rollers and Beam of Plow.

I.—Screw Gearing with which the standard E and Mole are raised or lowered in the ground as desired to grade the hole.

E.—Is a large substantial wrought Iron Cutter and Standard, by which B. A. C. (the Mole) is supported and carried through the ground, forming the hole.

B. & A.—Is the body of the Mole or Plow.

C.—Knife or fin on bottom of mole—which opens a place along the bottom of the ditch to allow water to pass up into the middle of the ditch—getting twice or three times the drainage surface with the same sized ditch.

A.—Is the great improvement Hammond's Mole Plow possesses over all competitors. It projects out behind the Cutter or Standard, and closes up the groove following the Standard, pressing the earth *all upwardly*, effectually protecting the ditch from filling up again. Runs with very little friction and makes a *solid* arch of the ditch, fully equal to the best 5½ inch drain tile.

D. and the Arrow are intended to represent the hole as formed—at any desired depth below the surface of the ground, from 2 to 3 feet—which is below where it would ever be disturbed by plowing or cultivation.

G.—Is a small hole dug to insert the plow, at beginning of the drain.

THE DRAIN or hole made by Hammond's Mole Plow is only pressed (and that very hard and compactly) on the upper parts, forming a complete and continuous arch, strong and nearly as durable as the best Drain Tile. Two men, with a good team of two yoke of oxen or horses, can make easily from 100 to 250 rods of drain per day.

In the last number of the *Valley Farmer*, we gave the testimony of a farmer of Ohio, in regard to the durability of the drain made by the Mole plow. We now give the testimony of several well-known farmers in regard to the working of the machine here illustrated. Those wishing further information, will address, A. HAMMOND, Jacksonville, Ill. or H. M. Thompson, 174 North Main Street, St. Louis, Mo.

Here is the Testimony referred to:

GENEVA, SCOTT COUNTY, ILLINOIS, September 20th, 1859.

This is to certify that we, the undersigned, having seen A. Hammond's Mole Ditcher at work, and examined the ditch made, believe the space made by the cutter is filled and pressed four times as solid as it was before the cutter made the opening, thereby avoiding liability to break or fill; the bottom of the ditch is not pressed at all, and a boy between 10 and 11 years old raised and lowered the cutter whilst it was in motion (thereby grading the ditch). Said Machine was drawn with one yoke of oxen, and the size of ditch made equal to 5½ inches in diameter: it was also run in dry ground.

JOSIAH WILLIAMS, SAMUEL F. CAMPBELL, WILLIAM RICHARDSON, A. J. BRADSHA

CULTIVATION OF GRASS.

Grass is among the most important staple crops of this country. The variety of grasses grown differs with the latitude and climate. In the more Northern portions of the country, a greater number of kinds of grass is grown than are found adapted to the climate of the South and West. Our Northern neighbors, who find it necessary to keep up their cattle and feed them from five to seven months in the year, devote the largest portion of their lands to grass. The same kinds of grasses that are cultivated for hay, also constitute their pasture grasses. Near the great city markets, where hay commands a ready sale, it is found to be one of the best paying crops that is grown. In these locations, where the crop is readily turned into cash, it is interesting to observe the effects of a little extra care and labor bestowed upon the meadows in the increased yield of hay per acre. For instance, taking the great State of New York, it is ascertained that six-tenths, more than one-half of the whole cultivated area of the State, is occupied by grass—the annual value of which is not less than $60,000,000. The average production of the meadows of the entire State, is 96 tons of dry hay to the hundred acres—a little less than one ton per acre—while the average production of King's county, situated near the city of New York, is 160 tons to the hundred acres: and yet, the soil of King's county can hardly be considered better than the average quality of the soil of the entire State. But this increased yield is the result of greater skill and care bestowed upon the cultivation by the farmers.

Upon our Western farms, the grasses are chiefly of two classes—one valuable only for pasturage, and the other for hay. On all the most fertile lands, blue-grass is indigenous, and affords the best of grass for pasture; while clover, orchard grass, red-top and Timothy are chiefly made into hay; but nine-tenths of the entire hay crop is of Timothy. In the markets of Cincinnati, Louisville, St. Louis and other Western cities, the price of hay during the last year has ranged about fifty per cent. higher than in the Eastern markets. It is an easy matter for our Western farmers to so manage their meadows as to increase their hay crop from fifty to one hundred per cent. annually In the first place, Timothy, as a general rule, should be sown in the fall as an independent crop. Too much care can hardly be taken in preparing a deep, well-pulverized soil: but what is of the greatest importance, is the after treatment of the meadows. After mowing it should never be grazed close; a good after-growth is all important for the protection of the plants during winter, and to preserve the ground in a light, mellow condition till spring. It is the dry, hot summer sun, after the hay harvest, and the exposure of the ground to the alternate freezing and thawing in winter, to which our meadows are exposed, that impairs the growth of Timothy, and greatly curtails the crop of hay.

Surface manuring, or top-dressing of Timothy meadows, is but little practiced by our Western farmers; and in no section of the country is it more important; and nowhere would it pay better. Not so much on account of the necessity of directly enriching the soil, as of the protection to the grass and the loose, friable condition imparted to it; yet the stimulating effects of the manure, carried to the roots of the grass by the rains and the melting snows during winter, will prove of great benefit. Without which, it will, at no distant period, become an absolute necessity, inasmuch as every crop of hay that is removed from the land takes with it a considerable portion of its original fertility.

On a properly cultivated and manured meadow, with the timely application of water by irrigation, from two to three tons of hay per acre may annually be grown. There are thousands of acres of bottom land along our Western rivers, contiguous to bluffs and rising grounds, from which flow copious streams of water, that can be readily commanded and rendered available for the overflow of the meadows, with results that would astonish those who are not familiar with its benefits.

The increased crop of hay grown upon a well-manured meadow, is not the only advantage to be derived from the manure. Where hay is grown for export, potatoes are also largely grown for market, because both being heavy crops, they must be grown near the most available means of transportation; and potatoes ought always to be grown on manured land, if the land has been long under cultivation. The manure applied to the meadow, increases the growth of grass, and leaves in the soil an immense supply of roots; which, when decayed, afford an excellent preparation for the potatoes; while the cultivation of the potatoes will subdue and clean the ground preparatory to re-sowing to grass. We throw out these hints now, hoping the readers of the *Valley Farmer* may profit by them.

A Cheap and Speedy Way to Set a Yard in Grass.

To attempt to secure a good sod upon a door-yard, or grass-plat in the garden, by sowing the seed, is a somewhat slow and uncertain business. To secure a good "stand" of grass in a field requires a good preparation of the soil, good seed and a favorable season: but to secure this in a small yard, exposed to shade, and liable to be scratched up by fowls, and trod down by children and injured, as it is liable when sown in a yard near the house, it is still more uncertain than in field culture; hence most people prefer to incur the expense of securing turf from the fields and commons for sodding their yards. This is an expensive process, and too frequently somebody's grounds in the neighborhood are made to suffer a depredation to supply the turf.

At different times during last season, in improving the grounds about the homestead, we had occasion to sod several pieces, but no rich, thick-set grounds were convenient where we

could procure the turf entire, we therefore adopted another plan. We procured less perfect sods, cut without care and threw them into the cart promiscuously, and after preparing the ground well to receive them, we chopped them up into small pieces, say from one to two inches across, more or less, and worked these under the surface, barely covering the roots, &c. After the first rain these small pieces of turf sent up numerous blades, and in a short time the ground became entirely covered over with grass. These experiments were tried several times from July to September, and always with perfect success, though of course the latest planting did not become so thickly set before cold weather set in. In all ordinary cases we should prefer this method to entire seeding, even if turf was at hand, on account of the saving of time and expense.

Blue grass roots are very tenacious of life, and when scattered in the way we have named, so as to cover one-quartor of the ground, will soon spread so as to make a thick-set lawn.

I'M GOING TO—THAT'S A FACT.

EDS. VALLEY FARMER:—I'm going to raise better corn this season than I ever have before, and the thing is plain enough. I *have* plowed my ground *very* deep. If I had not there would be no go in the matter. I like Jack frost to bite the clay pretty hard indeed. And I'm going to flush my ground in April very deep again, and harrow well. About the first of May I'm going to plant my corn in squares of four feet exactly. The seed shall be taken from the "butt end" of the best ears. I'm positively in favor of selections from the butt ends. I shall roll my corn in tar first, and then ashes. This acts like a charm to the young plants—besides moles and crows don't like tar, not a whit. I'll be sure to do this thing. I'll cover my corn just about two inches with well-pulverized earth, and begin to cultivate as soon as the plants are two inches high. Two, sometimes three plants, are to be left in a "hill." If the ground be pretty light, I'll use the cultivator for the first and second stirrings—then my Peoria twice—then my cultivator again. I like my field left pretty smooth. It won't *wash* so badly. I would not neglect to take the seed from the butt ends, nor forget to roll the corn in tar first, then ashes. About a pint of tar to a half bushel, and as much ashes as will adhere. And after all this, I'll give Mr. Somebody a tight squeeze for the premium. I'll see to this, sir.

I'm going to plant my potatoes "youst right" this spring—ground shall be well manured broadcast after first plowing, then plowed and harrowed and rolled. Plants can't suck anything out of hard clods, any more than pigs can out of hard knots. I'll plant my potatoes in squares of two feet—putting two good, sound, well-grown potatoes in each drop—shall cover with a plow pretty deep, so that when I pass my short-tooth light harrow over them, as soon as the first one dares to peep out of the ground it will not stir them from their nest. They must not be touched now any more than a man's honor. Their bed must not be approached *too near*, any more than some other beds. I'll not hill too much, but leave the squares *flat*. I remember to have noticed that last summer's rains didn't get down to the potatoes; so they had a dry time of it, and forgot to yield much. I'll be apt to dash a hand-full of ashes in their face, if they are not particular how they wag their heads. All this I'll do—then fatten on *pound* potatoes. All true sir.

And, I'm going to go all over my meadow, for various reasons. I like to be knocking around any how—confound a Solomon Stillwater on a nice little farm. But the meadow—there shan't be a missile left on it. My buggie-like buckeye don't like a snag, and it shall have things to its liking; and it has no fancy for a smash, so the stumps and rocks will have to find another location. The gutter is good enough for them. I don't mean a gutter in the meadow—there shall not be one there. I'd rather have a big rent in the unmentionable locality of my breeches, than a gutter in my meadow. So the fate of the gutters is sealed, you see; and the "cow blossoms" shall all be kicked and cuffed until they have, form and shape, all gone to fragments infinitesimal; and if my meadow should happen to get a little tight in the skin, I'll give it a genuine raking over with my harrow, and then heal up the wounds with a poultice of good, fine manure, Then, as a *finale*, I'll clip off just about forty or fifty hundred of prime Timothy as a return for my care and attention to each and every acre. And, as for the premium, I rather think I'll let that go by default in favor of my good neighbor, Woodson—but it's a little provoking to have it go, I confess. Better luck next time.

And now I'll open the gate into my "truck patch." This shall embrace just three acres—my *Omniana*, this—but I can pay court to my melons only this time. Well, I shall plant at the south end, my *Orange* melons—in the middle, my *Ice-cream*—and at the north end, my *Branch*. And these shall be separated by a good lot of sweet corn. They must not mix up their species. I object to too much mixing up of genders and kinds the world over—it's a losing process. I shall plant in squares of eight feet—raise my "hills" considerably, to guard against too much wet. Watermelons are not water lovers—though not dry meat, they like dry habits. Two shovelsfull of hog manure must be put at their disposal—they require extra feed, and that named is best for their health. A little from the hen-roost is excellent—but only a little. Too much will be sure to give them the fever, or yellow jaundice. These hate interlopers—weeds and grass especially. They must be routed and scouted by times. And, as for the devilish little bugs, I have given them many a Paddy's hint, but still they were dull of comprehension. *Can any of my neighbors come to my aid in this?* I'll plant about the fifth of May, and about the fifteenth, and about the first of June. I like them to ripen little by little, and this is the way to have it so. I have always been impolite enough to head neighbor Jenkins in the melon line, and I'm going to do so again—all of which I affirm, sir. N. M. H——G.

Rock Hill.

MERAMEC HORTICULTURAL SOCIETY.

SCHOOL HOUSE, ALLENTON, 2nd Feb. 1860.

The fourteenth monthly meeting of the Meramec Horticultural Society was held as above. The President in the chair. The minutes of previous meeting were read and approved.

Three samples of Lawton Blackberry wine were presented to the Society by Mr. John S. Seymour, of Eureka.

APPLES.—Samples were exhibited of Wine Sap, Rawles' Janet, Pottinger and Newtown Pippin, by the President; Rawles' Janet, by W. Harris; Rawles' Janet and Newtown Pippin by T. R. Allen.

The report of the Committee on Constitution and By-laws was received, and Committee discharged.

The articles of the Constitution and By-laws were then read, and discussed seriatim; and with slight amendments were unanimously adopted.

The President requested the Executive Committee to test and report upon the wines presented by Mr. Seymour.

On motion, the meeting adjourned for dinner.

AFTERNOON SESSION.

The Committee upon Wine presented the following report: The Committee having examined the three samples of wine presented by Mr. Seymour, of Eureka, made from the Lawton Blackberry, find all the samples very fine, and class their excellence in the following order, to wit: The sample classed by the Committee as No. 1, is an article of a beautiful amber color, rich flavor, fine body; and is esteemed by the Committee as a truly excellent wine, and can with confidence be placed along with the best articles of wine in common use; and is made by the addition of 3 lbs. of sugar to one gallon of juice. That classed as No. 2 is made with 2 lbs. of sugar to the gallon of juice. That classed as No. 3, has but 1lb of sugar to the gallon of juice; is much darker in the color than the preceding, with a considerable amount of astringency; and having that valuable medicinal property peculiar to the blackberry, preserved in a great degree. Mr. Seymour classes this wine as a claret. Mr. Seymour remarks that each of the above samples is made from one gallon of juice and two gallons of water.

L. D. MORSE, Chairman.

The wine was then submitted to the meeting at large amid expressions of satisfaction on every side.

The special order of the day was then called up.

MANURES.

1st—The necessity of a regular system of manuring. Second—The kinds of manure, and their value in different cases. Third—How to make, save and apply manures.

Dr. L. D. Morse was called upon as chairman of the Executive Committee, to open the subject. He remarked that the Committee selected this subject, not from their own individual knowledge of it, but on account of its value to the society and to the community at large. He, not being at present practically engaged in these operations, would prefer some of those in the habit of using manure to state their views. On one point he was perfectly clear, namely, its importance. We cannot look around us but we see instances of the evil results of the unnatural system of taking everything possible from the land, from year to year, till it had become completely worn out. This is equally important to the horticulturist. Orchards must be fed as well as grain fields. And we will find it of the utmost importance to adopt a judicious system, so as to maintain or regain the fertile condition of our lands.

Mr. O. Kittredge said, upon manures rests all our success in horticulture or agriculture. Its necessity will not be questioned. If we take from our gardens or fields a crop without repaying in the form of manure, our next crop will be lighter; and by long continuance of this method, our gardens and fields will not be worth cultivating. Liebig, in his recent "Letters on Agriculture," touches this point. He says: "With each crop, plant, or portion of a plant, taken away from a field, the soil loses a portion of its fertility; that is, it loses a portion of the power of again producing this crop, plant, or portion of a plant. A thousand grains of corn require from the soil a thousand times as much phosphoric acid as one grain; and a thousand stalks as much silicic acid as one stalk. If, therefore, there is a deficiency of a thousandth part of phosphoric or silicic acid in the soil, then the thousandth grain or stalk will not be formed. A single cornstalk removed from the field, makes this field bear one stalk less. This must be so; and this single fact ever present with the cultivator, should lead him to such practices as would always recuperate rather than depreciate his soil; so that, at the end of a hundred years of cultivation, the soil is better able to produce a paying crop, than it was the first year it was taken into hand." And what is true of the corn crop, is equally true of fruits, vegetables and flowers. Hence the necessity of manures. On the varieties of manure, and their value in different cases, much might be said, there being a large number of individuals engaged in the manufacture of artificial manure and the importation of guano; but I will notice those only which it is the province of every horticulturist to manufacture for himself from the waste of his house, stock, and garden or field.

First—Animal excrement is the most abundant, and on this we must rely for a basis. It is composed of those matters which have been used as the food of the animal, and been thrown off in a solid or liquid form. Its value will largely depend on the quality of the food consumed, and the care which has been taken to preserve it from the rays of the sun and the driving rains, by the use of sheds or other coverings. To make this available to the immediate wants of the plants, we should compost it: as solid manure in its fresh state cannot be appropriated by the plant, but must become decomposed so as to have its nitrogen turned into ammonia, and its other ingredients resolved into the conditions required by the plants; then only is it a fertilizer. Hence the necessity of composting.

This some of our Western folks may think requires some labor, and so it does. But our farmer friends would think it was labor that paid, if, by a course of manuring, they could raise the average crop of wheat from 12 or 15 bushels to 25 or 30, which it will do.

To make as much manure as possible, we must stable our cattle and horses, and arrange our stables so as to save the liquid manure as well as the solid. But all are not completely prepared for this. But much depends upon yarding the stock, and on having the yard not placed on a branch, creek, hillside or ravine, where the rain will wash away all the most valuable portions; but made dishing, to hold all. By some, intimately acquainted with the subject, the solid and liquid manure of a cow is held as equally valuable with the milk. The waste of the fodder and leaves, and loam or muck, may be put into the yard, and plowed occasionally in order to mix the whole together.

Our hogs, too, are a great help to our manure pile. If we only keep the number we have feed for, and keep these in a yard well supplied with material to work upon, it is only in this way that our greatest profit can be derived from our stock.

Our poultry wil pay their keeping. If we take care of their droppings, they will furnish us with guano equal to the imported. Night soil furnishes another rich fertilizer, which is generally lost; but, by a proper application of this manure, crops can be increased two or threefold. Slops from the house, including soap-suds, is another great addition to the compost heap, which is too often thrown away.

Ashes form another valuable manure. They should be kept dry, composted and applied to the soil, supplying potash, an ingredient often deficient. Bones should be saved and dissolved by acid or ashes, or applied whole under our grapevines or fruit trees. Chip

XUM

manure is another valuable fertilizer, and may be applied directly to the soil. If spread on clay soil and plowed in, will tend to keep the soil loose.

The application of the different kinds of manure, must depend on the character of the soil. While some would be suitable for our corn and potatoes, other kinds would be better for a top dressing for our meadows; and others still for our fruit trees. All would be useful somewhere; and the intelligent cultivator would soon be able to apply them properly, and always reap the benefit which follows the application of good manure.

Mr. T. R. Allen then rose to call, and said:

Mr. President—The present age seems to me to be peculiar for nonsense and innovation. Why all this ado about manures? Why have we this constant dinging in our ears of what is called scientific farming, and the necessity of making and saving and scientifically applying manures? What use is there in all this noise and fuss about guano, poudrette, the phosphates, ammonia, bone-dust, compost, etc. Now, sir, I object to all this prattle and fustian. First, because our forefathers did not do it. I mean they did not generally. True, I recollect, in my youthful days, in that good old, yet by these modern agriculturists, much abused State of Virginia, I was frequently, much against my inclination, compelled to be scraping up the manure about the stables, cattle yards, hog pens and ash-hoppers, and drawing it out on the fields. And, indeed, although Plaster Paris cost from $30 to $40 per ton, I have been compelled to drop a pinch of IT in each hill of corn, and to sow it broadcast on the wheat or clover. But even there, in those days, this lacked a good deal of universal custom. But, since I have gone back to the Old Dominion for illustration, allow me to refer to one instance of an eccentric Pennsylvania Dutchman, who had settled in our part of the country on what was conceded to be one of the most worn out and poorest farms in the country. Though I cannot exactly construe this case as extremely favoring the view I have taken of this subject, yet, to show that I am not prejudiced against any facts that may be brought to bear on the other side, I simply note it by the way, and let it pass for what it may be considered worth. This queer Dutchman would not allow a horse, cow, sheep, hog, or even a chicken of his to run outside of his own enclosures, for fear they would drop some manure that he would lose. Indeed, he kept all his animals, and, I believe, even his fowls, confined, not only in his own enclosures, but in small stables and close pens nearly the whole year. It really seemed cruel to think of confining the poor dumb creatures so contrary to their natural instincts, for the sake of the little manure that would drop from them. But, to the surprise of his neighbors, in spite of this seemingly cruel treatment of his animals, they always appeared fatter and plumper, their coats sleeker, their temper and dispositions milder, and their health better than those of his more considerate and merciful neighbors. But this queer man was not satisfied with the mere droppings of his animals; his avaricious disposition induced him to extreme carefulness in saving not only his hay, vegetables and grain, but every particle of the straw and fodder was collected to his barns; and, if possible, put under cover, and that which was not fit or needed for the food of his animals was given them for bedding. He was still not satisfied until he went to the woods and even gathered up the leaves, and hauled them in to litter his animals. And all this painstaking was, that he might add to his great manure heap. In fact, this man seemed to be governed on the one idea principle; and that idea, with him, was the making and saving of manure.

Another striking peculiarity about this man was, that in the spring, instead of following the custom of his neighbors, of rushing ahead and plowing up all the poor fields they possibly could, and planting the largest possible number of poor acres; driving their lank, lean animals on the high pressure system—that looked as though they had been kept through the winter on the race horse principle—so that they could boast of the number of acres they had planted. Instead of this, he seemed never to be in a hurry; always taking things easy. His fat, sleek horses walked leisurely to the plow; and after leisurely performing a fair, honest half-day's work, in a thorough manner, they as leisurely walked back to the stable. The time was all employed, but there was no need of rushing; for the number of acres to be plowed was limited to the size of the manure pile, and the amount that could be thoroughly cultivated in this leisurely way.

When harvest came round, while his neighbors had many acres to go over, he had but a few; and consequently was in no hurry, but took his time and saved every head of wheat, rye, or oats, as the case might be. And, strange to tell, his barns always seemed better filled than his neighbors; and often while they were compelled to buy, he had plenty and some to spare to them, at a good price, for ready money.

Now, all that I have further to say of this man at present is, that what I have related of him are facts that came under my own observation more than twenty years ago.

In the year 1839, I left the Old Dominion and became a resident of this noble State, which is also, and to about the same extent, the home of the brave and land of the free.

In these good old times (for be it remembered, this was before the time of these croakers about scientific agriculture in this country), a man was not thought the less of or made the subject of ridicule by his neighbors, if he fed his stock in the public road; if he hauled his fodder out of the field and threw it to his cattle in his neighbor's woods or the public highway. And if a man happened to have a stable—even if it was a poor concern—and the manure got too deep for convenience, he could remove the stable with less labor and expense than he could the manure. Or, if he chanced to be more wise and foresighted than his neighbor, and built his stable at the head of a ravine or on the bank of a creek or river, he thereby got rid of the nuisance without any labor or expense. But now, sir, how different things are getting to be. If a man, for the sake of a little of the needful, sells his straw-stack and allows it to be carried off his farm, he is ridiculed, because he happens to have some poor spots in his field, or some gullies that are getting a little deeper each year. If a man builds his barn at the head of a ravine, on the bank of a spring branch, creek or river, why there are surmises and doubts about his being compos mentis. Probably the next thing will be to apply to court to have guardians appointed for us! Why, sir, this is trenching upon our sacred rights! Away with such stuff. Then, these wiseacres come up and tell us that we are impoverishing the country, and destroying the inheritance of our posterity! Ah! there it is again. What, sir, has posterity done for us, that we should sacrifice our ease and cherished inclinations for their benefit? We appeal, sir, to the example of our wise forefathers. Did they not live for themselves, and leave their posterity to do the same?—I mean agriculturally, of course—and can we claim to be wiser than they? Out upon such nonsense. Then we are told that this is an age of progress; an age in which science and the arts are marching onward with gigantic strides; and that agriculture, too, should be regarded as a science and treated as such, and progress with the age.

Well, all we have further now to say is, let them show their faith by their works.

A member remarked, that a considerable amount of the difficulty that arose in the mind upon the first thought of manuring was found in conceiving of large fields of worn out land, that seemed a task of such magnitude to attempt its renovation, that the mind shrunk from it as overwhelming. He wished the mind to become habituated to conceive of the application of manure as food rather than as medicine. Now, to look

at this question as it stands, does not our everyday experience teach that it is easier to keep well than make well. Do not our physicians teach us that it is easier, with the simple exercise of common sense, to keep our systems in health by proper food, air, clothing and exercise, than to endeavor to patch up these systems when broken down by disease; and our purses tell us it is cheaper too. Do we not find that it is easier to keep our stock in good condition during the winter, than to put them into good condition in the spring, when their every energy is taxed by the press of labor. And these analogies hold equally good in regard to our fields and gardens. Let us adopt the motto, "Prevention is better than cure." The value of the ingredients that compose the manure heap has been well told by a previous speaker. In regard to those much to be lamented worn out lands, I would suggest, that, instead of shrinking from undertaking the task of renovation, think of how much can be manured and cultivated well, and do it; but let quality be the motto: not how many acres, but how many bushels from the acre. Then, let the balance rest; sow down in clover, or buckwheat, or peas, and plow under. You thus add to the elements of fertility more largely than at first appears; the stirring the soil fits it to absorb the gasses from the atmosphere, the clover, buckwheat, peas, or whatever the case may be, is taking largely from the atmosphere. When these are turned under, the vegetable matter becomes incorporated with the soil by the plow, and you have then the increase from all these sources, and nothing removed. Here you will see the gain in one year is large. Then, if it is put to pasture for sometime longer, you increase the stock-feeding capacities, and, of course, the manure heap, and build up the constitution of the land. The motto should be small farms, small fields, thorough rotation of crops; bushels to the acre instead of acres to the farm; and faith in the manure pile and the plow.

Mr. E. Vaughn was fully impressed with the importance of this subject. It seemed so obvious that if we always took from the field, and never put anything into them, they must become, as so many hundred acres in this country were, bankrupt and worthless. He expected to hear from some of those who had been engaged in these operations for so many years, to give some information on this subject.

Judge Becker had little experience in this question. It was but lately that its vast importance had struck his attention. And, although he did more in that direction than formerly, he was not prepared to express any opinion. Liquid manure, applied from carts like those used in sprinkling the streets in the city, he had seen tried with much success.

Dr. L. D. Morse thought it of importance that attention be directed to the alkaline manures. Stable manure contains the alkalies to some extent; ashes and lime are also of the utmost value, to the orchards in particular. And if orchards are not supplied with the fruit making elements, they will become as worthless as the fields. Lime to trees will be found one of the best and cheapest manures. Of course, there are some limestone soils that do not require lime. It may, in many cases, be applied quite largely, as much as 50 bushels to the acre.

The President said, that there were enough persons here to day to do much in getting correct ideas disseminated on this important subject; and if we could just get the members of the society to understand the importance of the subject, and determine to try it to the extent of their ability, governed by their own common sense, it would be an important movement for the country. We all know that almost anything will do as manure. Let us do all we can, and we will find that one-half of our land thus treated will yield as much as the whole now does; and we can thus change the conditions of our farms so as to secure paying crops.

Mr. Vaughn said, that in feeding stock, and making manure, straw, hay and cornstalk cutters, would be found of great service, saving so much of the material and facilitating its conversion into good manure, and be returned with interest to the land.

Judge Tippett said, as regards the necessity of manuring, there can be no question. Even friend Allen, who made so light of it, had demonstrated it most completely. The points on which information was most needed, are how we can best make and apply the manure. Upon the value of different manures, there is great diversity of opinion. I think one load from the horse stable worth two from the cow shed. I have tried chips, and that trial was plenty for me. In regard to lime and fruit trees, I was raised in a country where there was no limestone for thirty miles around, and they had fine trees: trees that were old and bearing when I was a boy, and are bearing still. There were apple, pear, plum, &c. as fine as could be seen. I believe I can use the stable manure: of the others I know but little. I think the idea suggested here to-day of using the manure as food, and not waiting till the land needed it as medicine, the true one. And think the mode of improving old land by plowing under green crops, good.

Mr. Airy does not know much of manures. Has seen a piece of land in crop since he was a boy which never had three loads of manure put upon it, and it bears good crops. Its condition was maintained by rotation of crops. This he deems as important as manures.

Mr. Allen regards the enriching of land by plowing in clover, as the most simple and efficient that can be adopted. If it is managed properly nothing will last in the ground so long.

On motion, resolved, that the subject of manures be continued at next meeting.

The President announced the next meeting will be held in the School House, Allenton, on the first Thursday of March On motion, the meeting adjourned.

WILLIAM MUIR, Secretary.

STEEPING SEED CORN.—E. M. of Kentucky, states that he has seen a notice, that, by soaking seed corn in a certain solution, the crop would be advanced six weeks, and asks for information on the subject.

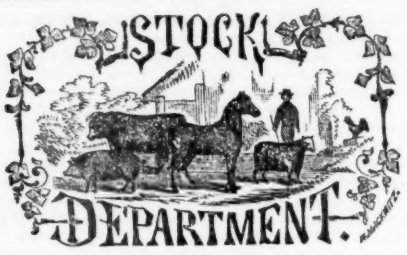
Perhaps our correspondent has reference to an alleged French discovery, by which it was stated that seeds soaked in a certain preparation, would thereby absorb sufficient fertilizing matter to produce full crops on almost any exhausted soil.

HOMEOPATHY may apply in certain diseased conditions of the animal organization, but to the waste of grain-producing ingredients in the soil, nothing less than a full equivalent will suffice.

Corn steeped in copperas water for a few hours and then mixed with plaster or ashes, so as to render it easy to drop, materially promotes the early vegetation of the seed, and with a favorable temperature imparts a green, healthy color to the young plants; but the supply of any manurial substance imparted to the seed in the form of steeps, can have no permanent effect much beyond the germinating period of the young plant.

PURE WATER.—If there is one article of common, every day consumption more conducive to health than any other, it is pure water. And if there is one kind of water more surely exempt from every variety of poison or impurities than any other, it certainly is that which is distilled in the clouds; these propositions I have found no one to deny. With these simple, obvious facts before them, what farmer or other conscientous parent will fail to supply their families with this one great essential to health and happiness.

XUM



IS SALTING STOCK A BENEFIT OR AN INJURY?

A writer in a late number of the *American Stock Journal*, labors hard with sundry arguments to show that salt is not only not beneficial but even injurious to stock, and that *instinct* has nothing to do in prompting animals to partake of it, and that the habit is altogether acquired like that of a Chinaman for opium, or the Indian for whisky. For he says: "The simple well-known fact that calves do not crave for nor voluntarily eat salt till trained, and, that it is often difficult to teach them the habit, is a strong evidence in opposition to its use. For instinct is as strong in the calf as in its dam in the degree of its needs, and if salt were a necessity to its growth and health, it would voluntarily consume it at first. The truth is, salt is an irritating stimulant, that engenders a morbid, and sometimes ravenous appetite for its continually repeated administration, even subsequent to the accelerated activity resulting from its first use."

There are neither facts nor arguments here offered that go to prove that salt is not essential to the health of stock. The calf, of course, is not moved by instinct to seek for salt, for its appetites are all supplied by the milk of its dam; as this supply is cut off and the calf is compelled to seek from the natural supply from the field, salt becomes essential and its natural appetite at once craves it. Cattle reared along the sea coast, and in the neighborhood of the bays and harbors supplied with salt water never require to be furnished with salt, because the atmosphere and herbage is sufficiently impregnated with it to supply the natural craving of the animal.

If the writer will visit some of the saline springs and "salt licks" of this State (Kentucky) and see the deep-worn paths that still exist, formed many years ago by the feet of the immense herds of buffalo that resorted thither for salt, he will find a conclusive argument that should convince him that instinct prompts the animal to seek salt, and that nature requires it to sustain a healthy action of the animal system. Even at the famous "Big-bone licks," the great mastodon laid his bones—to obtain it.

Again, says the writer—"Neither is instinct, as we often see it incorrectly stated, an infallible guide and protection to animals. Cows frequently have dangerous colic and inflammation, sometimes fatal, from eating too many potatoes. Oxen sometimes kill themselves with an excess of green succulent corn; and all familiar with the facts, must know that instinct is no protection against hoven or bloat in cattle that are admitted to clover, which they will eat while a heavy dew is upon it, frequently causing much trouble and sometimes fatal consequences, &c." Here the arguments of the writer are equally at fault. He confounds instinct with reason. Instinct teaches the calf to suck—the animal to eat; but something beyond instinct is necessary to teach the cow that an excess of potatoes will induce colic, or the ox that an over feed of green corn may prove fatal, or the animal that a stomach over-loaded with green clover wet with the morning dew will ferment and check healthy digestion and inflate the stomach with gas. Reason and intelligence beyond what the Creator has endowed the brute is necessary to teach this. Even man with all his intelligence often acts blindly in similar matters.

In pursuing the writer further, his arguments prove no more conclusive, that salt is not beneficial to domestic animals. Animal instinct and the experience of the intelligent farmer, teaches that salt is essential to stock. For horses, salt combined with clean wood ashes, we have found extremely beneficial in promoting appetite and a healthy action of the system.

Grade Cattle vs. Native.

The following testimony of a writer in the *Genesee Farmer*, in regard to the advantages of grade, over native animals, for feeding so fully corresponds with our own experience and observation that we give it for the benefit of those of our readers who are not fully familar with the merits of improved stock. The stock referred to were composed of natives, and grade short horns, from one half to seven-eighths blood. All the stock are treated alike, and receive the same care and attention. In winter the cows have warm stables; the young stock good sheds well littered. The native cows eat their meals quickly, and then grab all they can get from their neighbors. The natives in the yards do the same. The grades eat quietly and contentedly, and submit to be plundered of their last morsel by the others. Yet the grades come out in the spring increased in size, in good condition, and with sleek coats, while the natives seem to stop growing, and get so poor that it re-

quires a summer's pasturage to start them again.

This is the uniform experience of all farmers we have met with who have tried the improved short horns along with the common breed. A good short horn bull with a head of native cows, upon a farm where the object is to raise beef cattle, should be deemed indispensable. The beef is not only superior in quality, but is made in less time, and at half the cost of pasturage and grain compared with that made from scrub animals. The improved breeds will fatten at any age, while the natives must acquire full size and maturity before they will take on fat with full feeding, and then it is slow and expensive.

RABIES, OR HYDROPHOBIA.

BY HENRY CORBY, VETERINARY SURGEON.

I have used the word Hydrophobia as a heading for this article, because the disease is commonly known by that name; but I shall have to show that hydrophobia, or dread of water, is not an invariable symptom of the disease when it affects the lower animals; though when human beings are affected, it forms one of its most marked features.

The other term, Rabies, simply signifying madness, is therefore a preferable appellation.

My attention was drawn to the subject by seeing recently a case of the disease in a horse; and I thought that some description of that case, with a few remarks on the general nature of the disease, would prove interesting to the readers of the *Valley Farmer*.

The subject is important, because of the fearful readiness with which the disease may be communicated, not only from one animal to another, but also from animals to men; and its importance is hightened by the fact, that the disease when once developed, has hitherto proved incurable.

The first indication of ill health shown by my patient was loss of appetite and general dullness; but no great notice was taken of this, and he was sent to work as usual. During the morning he became very restless, biting at other horses, and was consequently sent home. When placed in the stable, he began to bite his chest and shoulders, and seemed to be tormented by an intolerable itching about the nose, causing him to rub that part against the manger or wall with great violence. He appeared very thirsty and drank water freely. When I saw him he was confined by two chains, so as to prevent him from biting himself; and was incessantly occupied either in biting these chains and the wall, or in rubbing his nose against them, seeming still troubled by the itching sensation in that part.

He breathed quickly, expanding his nostrils to their full extent; and, when I laid my hand on his shoulder or fore-leg, violent convulsive spasms were produced, and he evinced great irritation. He showed no savage propensity for mischief, though he would bite anything within his reach; but this seemed rather an involuntary expression of discomfort than a desire to injure, and he could be soothed into comparative quietude by gentle usage. Being left for a short time he either fell or threw himself down, and had to be released from the confinement of the chains before he could rise again. When released, he got up and commenced biting his fore-legs, this produced violent convulsive spasms, which shook his whole frame, and caused him to stagger to and fro in his stall.

It was ascertained that he had been bitten on the nose by a strange dog, about a month previous to the appearance of these symptoms, and as he gradually became more violent it was thought best to have him destroyed, and thus avoid further danger.

In reference to this case, I wish to draw attention to the time that had elapsed between the bite and the appearance of the symptoms; as nearly as could be learned, this was about a month: and from four to six weeks may be taken as the usual time, though in some instances the disease does not develop itself until two, three, or even six months after the bite. But these cases are rare, and an animal that has been bitten may be looked upon as having escaped the disease, if no symptoms of madness are shown within two months. By reason of this long interval between the bite and the manifestation of the symptoms, it will often happen that when the disease shows itself, the fact of the bite will have been forgotten; and as the symptoms are not always well marked, those who have charge of the affected animal, run considerable risk of becoming inoculated, especially if they attempt to administer medicine. Whenever, therefore, an animal shows any of the symptoms that have been described; and in the horse, especially, if a tendency to bite is associated with great irritation in some particular spot (as shown by rubbing or gnawing the part), then the case should be viewed with great suspicion and treated accordingly.

I have not space for a full description of the symptoms of this disease as it affects the dog, but one or two remarks may be made. I have already said that dread of water is not to be relied on as a symptom, nor is there usually much discharge of saliva from the mouth; the dog is generally dull and sleepy, especially in the early stage of the disease, but at the same time very irritable when disturbed. After a time he becomes very restless, and if confined will endeavor to escape by gnawing his chain or the door of the place in which he is shut, and then comes out all the propensity for mischief which is recognized at once as true madness.

Only one thing remains to be noticed, and that is, the proper treatment of an animal that has been bitten. In such a case it will be safest to cut out the bitten part as soon as possible, and then apply either a hot iron or some caustic to the surface left by the knife. If the wound be in such a situation as to render the cutting out difficult or dangerous, the iron or the caustic alone may be used; the object being to remove or destroy the virus, and also the vessels with which it is in contact, so as to prevent its absorption into the system. For this reason, these precautions should be taken as soon as possible after the bite has been inflicted.

St. Louis, Mo.

XUM

HOG CHOLERA.

In the volume of the *Valley Farmer*, for 1859, we published a remedy for the Hog Cholera, one that has proved effectual in entirely staying that fearful malady in many instances. In a late number of the *Country Gentleman*, Mr. J. T. Warder, of Clark county, Ohio, gives another that has cured many hogs that were suffering from this disease. The remedy is so simple and easy of application that we give it, together with some extracts from Mr. Warder's communication. It is known to those who are familiar with this disease, that the symptoms are not always developed alike in all animals. Mr. W. describes his as accompanied with excessive purging (succeeding the loss of appetite), which lasts some few hours; and then, again, one or two days; and generally when red blotches appear on the skin, and blood passes from the nose, the disease has run its course, and will prove fatal very soon.

The writer says: "I had some experience with it in June, 1858. I was feeding corn, and the hogs were running in a woods pasture; and the nearest point from the public road was 80 rods and further to a neighbor's stock. The purging first attracted my attention in the evening of one day; and 24 hours after, we had buried 8 out of 120, though at the first sight of the disorder, we removed those not showing it. Within three days we lost 25 head, when my attention was directed to an article in a Cincinnati paper, from a physician, recommending some one to try alum as a substance likely to constipate the bowels..

This being a cheap remedy, I prepared a bucketfull of very strong solution of alum in cold water; and with a rope and slipnoose, and a horn, with the small end sawed off to the hollow part, proceeded to dose all I could find affected. With the rope behind the tusk, we could keep the mouth up; and by shaking could compel the animal to swallow the drench poured through the horn. Out of 23 we drenched, only five died; though three were in the last stage and were already bleeding at the nose, two of which were saved. I also fed to the lot a pound of pulverized alum in a bucket of middlings per day—fed to them as I would salt at their feeding ground—and in the course of two weeks all signs of the disease was gone, except the change in the appearance of the hogs that had been attacked, which had generally been the finest and thriftiest in the lot, but soon took the other; and many never recovered so as to make good pork, when the rest were ready for market in November."

This is a cheap remedy and easy to administer: and may be fed in meal or middlings in the first stages of the disease, or as a preventive to those not yet attacked, while the disease is about.

We should be pleased to hear of the result in any cases where a trial is made of this or any other proposed remedy. The disease is yet a mysterious one, and the value of any remedy must be proved by experience.

WOOL GROWING IN MISSOURI.

Mr. D. A. A. Nichols, in answer to the inquiries of a correspondent of the *Country Gentleman*, in regard to the feasibility of keeping fine-wooled sheep on the swamp lands of Missouri, says:—

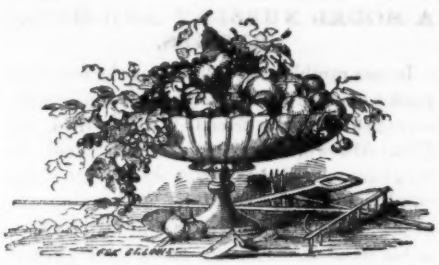
"In answer to this I will first say, that as all the lands in any State, for which the government price is but twelve and a half cents per acre, are either swamp lands or so close to swamps that they are subject to miasma—my own opinion would be, that it would not be very healthy either for sheep or the shepherd, and would hardly be profitable to undertake raising wool in such sections.

"There is a large amount of dry prairie, and hilly and even mountainous country, where wool raising would be profitable. North of the Missouri river the land is either level or rolling, and is the richest soil and under the best cultivation of any part of the State. South of the Missouri, the land rises as far West as the Osage; and beyond that river the land gradually rises into a hilly and even mountainous region, forming a part of the range of mountains called the Ozark. Some distance beyond the Osage commences the vast range of prairies, which stretches to the Rocky Mountains on the West, and the Gulf of Mexico on the South. This vast prairie, so long the feeding ground of countless herds of buffaloes, is destined to be the best stock-growing and wool raising portion of the United States. The prairie is dry, and further South it is well-watered, and in Texas the grass grows, the year round; but, in Missouri, stock has to be fed grain in the winter and sometimes hay or other fodder.

"My brother wintered a flock of sheep in the extreme south-western part of Missouri, last winter, and he informs me that there was no snow of any consequence there, and he had to feed nothing but grain, as they picked the most of their living on the prairies. He says good prairie land can be bought in that region for $2 00 per acre, and the climate is considered very healthy. There are occasional cases of fevers, generally intermittent, fever and ague, &c. This is the case throughout the whole country drained by the Mississippi and its branches.

"If my brother had never traveled in Texas, I think he would have located in western Missouri, he was so well pleased with its facilities for the successful growing of fine wool."

We have long regarded this region of country the most favorable of any for stock raising, in view of the climate, cheapness of land and the nearness to the more thickly settled portions of the country and to market, and we know of no branch of farming that can be so profitably carried on with so little labor.



HORTICULTURAL.

TRAINING CHERRY TREES.

The cultivation of the finer kinds of cherries in our section of the West, has been attended with but indifferent success; we may say, with general failure. But, on proper soil and with proper training, many excellent kinds may be grown with as much certainty and success, as apples or pears, and with more certainty than peaches or plums. The failures in this section, have generally been the result of two causes combined. First, improper soil, generally arising from too much moisture. Either a soil naturally dry, or one made so by drainage is requisite. The next great cause of failure arises from a too luxuriant and immature growth of wood, from the cause we have named, and the exposure of the main stem of the tree to the burning rays of the sun, by training the head too high, and leaving the stem naked. Thus the trees are liable to injury, both in Winter and in Summer. In Winter, when the sap is congealed by the intense cold of the night—and the coldest nights are frequently succeeded by a calm atmosphere, and a bright sun—the rays of the sun falling upon the body of the tree suddenly thaw it, and the effect is like that upon a potato under like circumstances. The side toward the sun becomes diseased, and before mid-summer the bark bursts showing one side of the tree entirely killed; and frequently after the diseased sap has made the circuit of the tree, the leaves suddenly droop, and within an hour the whole tree withers. With most varieties of the cherry the trees should be trained with low heads, that is, causing the branches to put out within one foot, or at furthest two feet from the ground, so that the branches may shade and protect the stem from the sun's rays. This is easily done, if the training be attended to in time. To cause the tree to head low, it is only necessary to cut the main branch back to twelve or eighteen inches in hight when but one year from the bud. This will cause a vigorous growth of branches to start near the ground, when with a little care in pinching back the too vigorous shoots a low, handsome, well-balanced head may be secured. Many of the trees are allowed to head too high, before they are sold from the nursery. These may, however, generally be forced to shoot out below by cutting the top off to the hight stated above, though not with the same uniformity and certainty as when cut back at an earlier period of their growth. It is better to select trees but one year from the graft and cut them back when transplanted, than to buy those at two years growth that have been allowed to run up too high.

At Shaker Village, Pleasant Hill, Kentucky, cherries are grown in large quantities and with as much certainty as any of their standard fruits. Not only do they grow the Morrello and other sour cherries, but many of the best sweet kinds. Their trees are generally grown on dry, gravelly soil.

Cherry trees in this climate should never be planted close to the south side of a board fence or building, where the heat of the sun will be reflected upon them. Trees thus planted will generally be killed the first severe Winter after they have got well established. An open field with a belt of trees to break the Northern blast is to be preferred.

INSECTS ON FRUIT TREES.

Mr. C. H. Rosenstiel, a German fruit grower, of northern Illinois, in writing to the *Ohio Cultivator* on the subject of various insects injurious to fruit trees and the remedy, recommends white-washing the bodies of the trees, with the view to destroy the insects, and to kill the eggs that may be deposited in the crevices of the bark. He also recommends fish-oil, rubbed upon the body and branches of trees with a stiff brush, to kill bark lice.

These applications may have the effect to kill the insects; yet, we think, they are liable to injure the trees by filling the pores of the bark, even if they do not kill the trees. We know, from personal observation, that tar applied to young apple trees has killed them; and only from the fact that the tar, when it became hardened from the effects of the weather, so filled the pores of the bark that the trees died. Now, we regard it as evident, that any application of grease, oil, or lime and water, has a tendency to fill these minute pores, and will more or less impair the health and vigorous growth of the tree.

Any alkaline application, in the form of whale-oil soap, or strong home-made soap, is equally or more destructive to any insects that harbor on the bark of the trees; while, at the same time, it is not only not injurious in any way to the trees, but actually beneficial. The caustic action of this application will readily kill all the insects with which it comes in contact; and, also, destroy all mosses on the bark, giving the trees a smooth, healthy bark; and, as the substance is gradually washed off by the rains, it penetrates to the roots of the trees, and is beneficial in other ways in promoting the growth.

For bark-lice, a few leaves of powdered tobacco or common snuff, if mixed with the soap, will complete the work of death on the instant of application.

Since writing the foregoing, we have met with the following in the *Scientific American*, which sustains our observations in regard to the injurious effects of coal-tar, as well as the substances we have named:

COAL-TAR FOR TREES.

Messrs. Editors: It is stated on page 370, Vol, 1 (New Series), *Scientific American*, that you have been assured by those who have tried the experiment, that coal-tar is excellent for preventing animals from girdling fruit and other trees. I have a friend who was assured some years ago that it was good to prevent ants from climbing up such trees. This induced him to apply it with a brush to about 30 different apple trees in the month of June. In a few days afterwards, he had the mortification of seeing them girdled by it, more mechanically perfect than could have been done by either mice or rabbits! I think it nearly equal to *nitric acid* for trees and vegetables. A. H.

Memphis, Tenn.

The fatal effects of the coal-tar in the instance alluded to, was undoubtedly owing in a great degree, to the time the application was made—just at the height of the growing season when the flow of sap was the most vigorous—the tar, entering into the circulation with the sap, at once carried death through the whole tree, and caused the bark to peel off. Had the coal-tar, or any of the applications referred to above, been applied at a season when the circulation was less active, the result might not have been so immediately fatal, yet highly injurious. The difference of opinion that seems to prevail in regard to the effects of these applications, arises alone from the different seasons at which it is done. They may keep off rabbits, insects, &c.; but careful observation would prove also, that they could not be applied at any season without injurious consequences to the health of the tree.

A MODEL NURSERY AND MODEL HEDGES.

In our rambles last fall among the farms and gardens in the various sections of the country, we called upon our friend, William Reid, Esq. Elizabethtown, New Jersey. Mr. Reid has long been regarded as one of the most thorough cultivators in the country. It has been frequently said that a weed can hardly be found in his grounds. This we found to be literally true. Mr. R. remarked, that he finds it easier to prevent weeds from growing than to kill them after they have attained a foothold. The benefits of this system of thorough cultivation was apparent in all crops in all parts of his grounds. More beautiful, vigorous and healthy fruit and ornamental trees, we have never before seen. Besides being convinced of the profit there is in good culture, Mr. R. has equally proved the value of under-draining. His entire nursery has been under-drained. Through the centre of the grounds runs an open ditch, four or five feet in depth, with sloping banks thickly set with blue-grass. These banks are kept in the neatest manner by repeated cutting of the grass, forming a very ornamental feature of the ground. Into this ditch, from the numerous drain-tiles, pure streams of water were received from the overcharged soil.

Another interesting feature in these grounds is the hedges. Of these there were specimens of the Osage Orange, Honey Locust, American Arborvitæ, and Norway Spruce—all the most perfect models of their kind. In viewing these, our greatest wish was, that the thousands of those in the West who have made abortive attempts to grow hedges, could witness the perfection of these and learn by what simple means they may be produced. They are as perfect in form as if they had been molded at will, as they were. The whole secret of which is, as we have explained again and again, proper culture and timely and thorough cutting. That of the Osage Orange is about six feet high; *broad, thick and strong* at the base, with the sides terminating at the ridge equally dense and smooth. That composed of Honey Locust submitted equally well to the shears; had assumed an equal dwarfish habit, though from the nature of its growth is less compact; yet stubborn and close enough to turn the most unruly animal. The Hemlock and Norway Spruce, are designed more as model screens than as substantial fences.

Among the objects of special interest in the grounds of Mr. Reid, is a noble specimen of the *Sequoiæ gigantea* (the big tree of California). This tree is eight or nine years old, and perhaps as many feet high; and is truly a splendid descendant of those mighty monarchs of the great mountains of the West.

A visit to Mr. Reid's place, will well repay any one who would witness a clear demonstration of the advantages of clean culture.

[Written for the Valley Farmer.]

AN ESSAY ON THE CULTURE OF THE GRAPE IN MISSOURI.

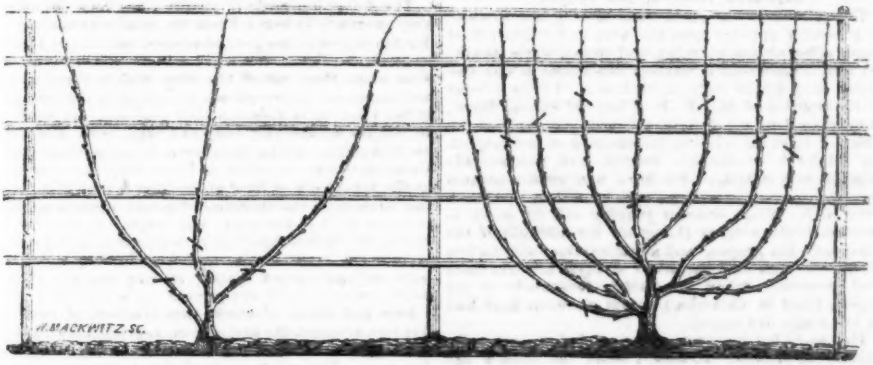
BY GEORGE HUSMANN.

(Continued from our last.)

TRAINING OF THE VINE TO COVER ARBORS AND HOUSES.

This is altogether different from the treatment in vineyards, as fruit is but a secondary object in this, the principal object being to cover a large space with dense foliage. However, a vine, if treated judiciously, will also produce a large quantity of fruit, although not of as good a quality as in the vineyard.

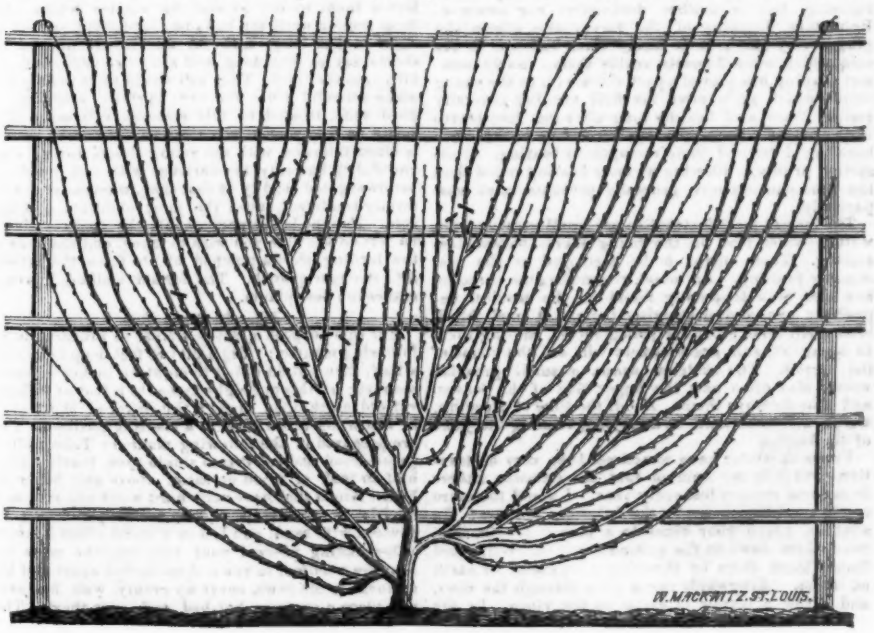
Our first step must be, to grow very strong plants, to cover a large space. Prepare a border, by digging a trench, two feet deep and four feet wide. Fill this with good soil, decomposed leaves, burnt bones, etc. Into this plant strong plants, cut back as for vineyard planting. Leave but one shoot to grow on them during the first summer, which will get very strong. Cut this back, the following spring, to three buds. These will each throw out a strong shoot, which should be tied to the arbor they are designed to cover, as shown in the accompanying drawing, and left to grow



The Vine, Second Year, before Pruning.

The Vine, Third Year, before Pruning.

unchecked. In the spring following, cut each of them back to three eyes, as it must be our object first to get a good basis for our vines. This will give us nine canes the third summer, and the vine being now thoroughly established and strong, we can begin to work in good earnest. It will be perceived, that the vine has three different sections or principal branches, each with three canes. Cut one of these back to two eyes, and the other two to canes of corresponding length with the strength of the vine. These are tied up, and all the laterals they throw out left unchecked, and distributed evenly over the trellis. In



Arbor Training, Fourth Year, before Pruning.

the spring following, if the vine looks very thrifty, all of these may be cut back to two eyes each, one being calculated to produce fruit, and the other to produce a young cane again. The spring following, the strongest is cut to four to five, and the weakest to one eye, and the spurs at the bottom are kept up by the renewal mode of training, to come in as a reserve, should any of the branches become diseased. In this manner a vine can be made, in course of time, to cover a large space, and get very old. The great vine at Windsor Park was planted more than fifty years ago, and in 1850 it produced two thousand large bunches of magnificent grapes, filled a house 138 feet long and 16 feet wide, and had a stem two feet nine inches in circumference. This is one of the largest on record. They need, however, strong manuring, every year, to come to full perfection.

DISEASES, INSECTS, AND FROSTS.

The mildew is our most formidable grape disease. It generally appears from the fifth to the fifteenth of June, after abundant rains, and damp, warm weather: and I have seen it destroy two-thirds of our Catawba crop within forty-eight hours. I fully concur in the opinion of Mr. T. F. Allen, of Salem, Mass., as expressed in the Patent Office Report for 1854, to which I refer all wishing information on the subject. He thinks it a parasitic fungus, and recommends sulphur as a remedy. We have had some seasons a very dry, pure atmosphere, and have then not had a trace of it. Close summer pruning will do much to prevent it, throwing as it does all the strength of the vines into the grapes, and allowing freer circulation of air. It was first perceived in 1849, and has since that generally taken one-half to two-thirds of our grapes, (that is, Catawba,) except when we have had an unusually dry season.

The so-called grey rot, or grape cholera, generally follows the mildew. Indeed, I think the mildew the principal cause of it, as I generally find it on berries whose stems have been injured by the mildew. The principal cause of rot and mildew, all agree, is excess of moisture around the roots, and damp, moist weather. The spotted, or brown rot, will also take some of the Catawba almost every year; is, however, more destructive on the Isabella and Herbemont. The bitter rot, or speck, sometimes appears shortly before ripening, but is neither destructive nor common. Premature dropping of the leaves also affects the grapes very much, as it leaves them exposed to the sun, which often literally scalds them. Early summer pruning has proved a partial remedy, as the young leaves which grow after the first pruning generally remain fresh and healthy long after the first leaves have dropped. Such vines are affected most, that have been taxed beyond their strength in bearing. Close spring pruning, allowing no more bearing wood than the vine can support, generally prevents it, at least partially.

The insects most destructive are small grey or green worms, which feed on the young leaves before blossoming. These ought to be destroyed at the first summer pruning. An insect, resembling the curculio, has also been frequently found on the berries, depositing ova and destroying them. A small black beetle will often sting the young shoots, causing them to break off, and grasshoppers will eat the stems of the berries. The skeleton worm, a small greenish worm, also often eats the upper side of the leaves, and thus destroys them. About the time of ripening, wasps will sometimes be annoying, sucking the juice of the berries.

Frosts in winter have sometimes been very destructive, and it is my opinion that the Catawba suffers from them more or less every year. I would therefore recommend laying in, in the following manner: In autumn, prune your vines to a proper length, then bend them down to the ground along the trellis, and fasten them there by throwing a spadeful of earth on them. Afterwards run a plow through the rows, and throw a furrow of earth on the vines. In the spring, take them up, by running a dung-fork under them and lifting them up. This is a very simple and expeditious method, and has been successfully followed near Galena, Ill., by Mr. James Soulard and others. The cost of the whole operation will not be over $5 to $10 per acre, and will be found much safer than trusting to chance to bring a mild winter. It is here, again, that the advantages of such hardy kinds as Norton's Virginia and Concord, over the Catawba, will be perceived and appreciated by all who try them.

Late spring frosts will also sometimes destroy the young shoots in low localities. I would recommend not to tie the vines too early, as they are not so easily hurt by frost when kept in motion by draughts of air.

METHODS TO PROPAGATE NEW AND RARE KINDS.

I. By Grafting.

The following mode of grafting has been practiced very successfully here: From the middle to the end of March, dig away the ground around the vine you wish to graft, until you come to a smooth place to insert your scion, then cut off the vine with a sharp knife, and insert one or two scions, according to the strength of the vine, as in common cleft grafting, taking care to cut the wedge very long and thin, with shoulders on both sides, cutting your scion to two or three eyes. Great care must be taken to insert the scion properly as the inner bark or liber of the vine is very thin, and the success of the operation depends upon a perfect juncture of it in the stock and scion. If the vine is strong no further bandage is necessary, only press a little moist earth on the wound, and fill up carefully with well-pulverized earth. If only one eye of the scion remains above the ground, so much the better. I have had shoots of scions thus inserted, of twenty-five feet in length the first season, bearing a few bunches of grapes, while the next season they produced a full crop. The advantages of this method in testing new kinds, over the common way of planting young vines, will be at once perceived, as there is more than a year gained by it.

II. By Layering.

In the spring, before the buds start, make a bed of fine mould under your vines, then take canes of last year's growth, prune off all dry and imperfect wood, and fasten them to the ground by wooden hooks. Let them remain until the buds have sprouted, say six or eight inches long, then fill fine mould around the shoots, say an inch deep, and after two or three weeks fill up another inch. They will strike roots readily and make splendid vines for next spring's planting. A good vine, treated in this manner, will make from thirty to fifty plants in a season. The same process is often followed with the young shoots during June and July; but only the varieties with soft wood can be propagated readily at that time, whereas under the former treatment, even the most obdurate will take root. For the latter purpose, all the suckers should be left on the vine you wish to layer, and the ends of the leading shoots pinched off, to force the laterals into stronger growth. The former method, however, makes the best plants.

III. By Single Eyes.

For this purpose a hot-bed must be prepared in the following manner: Dig a pit two feet deep to two and a half, then put in a foot to eighteen inches of strong manure; on this put eight inches to a foot of well pulverized earth, then make a thin layer of short moss, in which insert the buds in a slanting position. They are prepared in the following manner: Take well ripened wood and cut it into single eyes, leaving about half an inch of wood on them, above and below the bud. Kinds that have very hard wood will root more readily if cut a week or two before, put into a box covered with sand, and left in a moist cellar to sweat. After having pressed your buds into the moss in a slanting position, in rows three inches apart and half an inch in the rows, cover up evenly, with fine sand, and place a common hot-bed sash over them. They

must be kept moist and given air freely, or they will damp off. An immense number of plants can thus be grown from a few vines, and in a small space; but they need close attention, and will at the best only make weak plants the first year.

VARIETIES OF GRAPES.

I. Varieties Tried Here.

CATAWBA.—As yet generally cultivated, and would be an excellent grape were it not so liable to rot. Bunch, medium to large; half an inch in diameter, round, dark red, or copper color, sometimes almost black here, covered with a fine lilac bloom, flesh pulpy, sweet and good. Makes a good wine, varying from straw color to pink, of a fine, fruity aroma, making an excellent champagne, and a good dry hock. It is an abundant bearer in dry seasons, and increases readily from layers and cuttings. Ripens in September.

ISABELLA.—Does not always succeed here; sometimes good, often indifferent. Bunches long, medium, loose; berries, large, oval, black; sweet, but musky and pulpy, subject to rot. Not worthy of cultivation where the following can be had:

CONCORD.—Proves very successful here—of much better quality than at the East, and entirely free from mildew and rot. Bunch large and heavy, shouldered, somewhat compact; berries longer than Catawba, round, black, buttery, very sweet and rich. A fine table grape, but has not as yet been tested for wine here. Vine strong and vigorous, very hardy, will keep its leaves fresh and green until frost, and increases readily from layers and cuttings. Ripens two weeks before Catawba, and is a much better market grape. Should be in every collection, and will give more clear profit as a market grape than any other variety yet tried here.

NORTON'S VIRGINIA—NORTON'S SEEDLING.—This grape has proved eminently successful here, and has opened a new era in American grape culture. While the wine of the Catawba is often compared to good hock, in Norton's Virginia we have a wine of an entirely different character, which will compare favorably with good Port wine or Burgundy. Vine vigorous and hardy, productive, starting a week later in the spring than the Catawba, yet ripening its fruit a week sooner, which will make it very valuable in low localities. Bunches medium, compact; berries small, black, sweet and rich, only moderately juicy, makes an excellent dark red wine; not subject to mildew and rot. A most reliable grape in all localities.

HERBEMONT.—Received from Cincinnati under the name of Lenoir. Very successful here, but rather tender; requires covering in hard winters; a very vigorous grower, and but very little subject to mildew or rot. Bunches long, compact, shouldered; berries below medium, black, covered with a blue bloom; skin thin, sweet; flesh without pulp, juicy and high-flavored, delicious, fine for the table, and makes excellent wine; very productive. Ripens with the Catawba, but blooms a week to ten days later.

MISSOURI.—Missouri Bird's Eye. A nice little grape for the table, and makes an excellent wine. Bunches long, loose, shouldered; berries small, black, very sweet; ripens a week before Catawba. Not subject to mildew and rot, vine a moderate grower and bearer; wine resembling good Madeira, in color, flavor and body.

II. Varieties Fruited Several Times, Promising Well, but not Sufficiently Tested.

POESCHEL'S MAMMOTH.—A seedling of the Mammoth Catawba, raised by Mr. Michael Poeschel. Bunches large and heavy, sometimes shouldered. Very compact. Berries very large, often an inch and a quarter in diameter, round, color like Catawba, pulpy, but juicy, with an agreeable, sweet, vinous taste. Fruited twice, makes good wine, and looks truly splendid this season. But little subject to rot, ripens after Catawba, and promises to be a valuable acquisition.

CRYSTAL.—A seedling of the Catawba, originated with Mr. Fricke, near Hermann. Bunches medium, compact, shouldered; berries somewhat smaller than Catawba, greenish white in the shade, amber colored in the sun; translucent, covered with a white bloom; flesh somewhat pulpy, juicy, sweet and delicious. A moderate grower, promises to be valuable as a table grape.

(To be continued.)

[Written for the Valley Farmer.]

Flowers for Summer and Fall.

BY CAREW SANDERS.

A comparatively small flower garden or yard, may, by a judicious selection of kinds, and the exercise of a little skill and care in their management, be made to produce a very happy effect. A half dozen flower beds, cut out of the green turf, or a four or six feet border, skirting a walk to the house, or by the fence, if well stocked and neatly kept, may be made to contain a great variety, embracing a good succession of bloom, and afford more real pleasure and satisfaction than a large rambling place, illy stocked and slovenly kept. A little farm well tilled, is the farmer's motto; and a little garden, well filled, is ours. Not to crowding or suffocation, of course, we mean; nor that a large place, equally well kept and planted with the small one, is not its superior. But what we want to show, is, that a large garden is not absolutely necessary to the possession and enjoyment of a great and good variety of flowers.

We started with the intention of offering a few hints as to which are good things to afford a succession of bloom all through the season. First come the hardy bulbs, and after them the bulk of the hardy herbaceous perennials, and then spring and the gayety of the flower garden are over, without we replenish it in part from the greenhouse and by annuals.

Of course we don't mean by this that there are no flowers to bloom after spring is over, because there are some scattering all through the summer; but the first grand rush is over, and from a host of bloom, it would dwindle down to a few at a time, were it not for the new beauties raised under glass and ready to turn out to commence their summer's work just as soon as the weather is fit for them to venture out.

ROSES, VERBENAS and PHLOXES are indispensable—every lady knows that; and these three, of themselves, would not let the garden become dreary if they were abundant. But there are others which form a good variety, and are little inferior to the favorites, for brilliancy and lasting quality. Prominent among these is the PETUNIA, which seems to enjoy the glare of the summer's sun, and blooms on in great profusion and brilliancy; but the most decided and striking colors should be chosen, as the deep crimson, pure white, or strongly marked, variegated varieties (and we have now plenty of double ones of all colors), thus doing away with the flimsy appearance of many of the single ones. The HELIOTROPE, with its modest, unpretending flowers, of such delicious fragrance must not be left out, or you lose a rare treat for the sense of smell, all the summer. All the scented GERANIUMS, for the same reason, must be chosen; a leaf or two of them, mixed in the boquet, adds another charm to it, not possessed before. The Scarlet GERANIUM class, for their gorgeous foliage and brilliant flowers, must be added.

The AGERATUM, MEXICANUM and CELESTINUM form a charming bed of blue, blooming all through the summer, and making large bushes. While the NEREMBERGIAS are equal to the Petunia in their enjoyment of the sun, and are constantly covered with their salver-shaped, pale lavender, blue flowers. Next should stand the FEATHERFEW—pure white and double flowers, of long continuance, and one of the best for our purpose.

The LANTANAS, of several varieties, are very pretty, though not equal in habit and abundance of bloom to

some others, are still worthy of a place in the summer garden. For shady and moist situations there is the Daisy, Pansy, Forget Me Not, Lobelia, Violet and Musk Plant—all these afford a pretty variety of sweet and beautiful flowers. Among the annuals none are better than the class of India and China Pinks—plants of exquisite beauty and fragrance; and all the whole family of Carnation Pinks and Picotees are unsurpassed for both these qualities. The Cuphea Platycentra and Antirhinum should not be forgotten; and as we approach the fall months nothing can exceed the brilliancy of the truly gergeons Salvia Splendens Major—a mass of dazzling scarlet—or the rich, deep, sky-blue, of the Salvia Patens, which blooms pretty freely in a moist, somewhat shaded situation. There are a great many more we might mention, but the Asters, Dahlias, Chrysanthemums, and last, Roses, must wind up our list of names for the present.

MERAMEC HORTICULTURAL SOCIETY.

Allenton School House, 1st March, 1860.

The fifteenth monthly meeting of the Meramec Horticultural Society was held as above. The President in the chair. Mrs. J. C. Blakey presented hand boquet of Salvia Splendens, Mignionette, Pink Verbena, Rose Geranium, Horse-shoe Geranium, &c; Mr. F. W. Braches, Swede and White French Turnip, well kept; Mr. W. Harris, Blue Neshannock, White Neshannock, and English Fluke Potatoes and Jeneton apples, all in fine condition. John Garnett presented a sample box of rare garden seeds, with the request that the Society test them and report. Geo. Husmann presented bottle of Norton's Virginia Wine.

The Corresponding Secretary read a communication from the St. Louis Gas Co. in reply to an inquiry made by him as to the conditions on which a quantity of the refuse lime could be obtained for experiment as manure, offering to furnish 20 barrels free of charge, the barrels and incidental expenses to be borne by the Society.

These were then apportioned among the members, with the request to use the common lime in juxtaposition with the gas house lime, as affording the best test of comparative value.

J. C. Blakey stated, that being on the Fruit Committee, he would mention that he had his Vicar of Winkfield and Burre de Anjou winter killed. He had two rows of them last year, some of them died and he replaced them with the Madelaine. This winter the whole of these varieties were killed to the ground; while the Madelaine, planted among them in the same rows, were doing well. Their position in the orchard was good; were well cultivated and four year old trees. The Secretary had several trees of the Vicar of Winkfield, that he had occasion to notice this week, and they had stood the winter so far quite well. Mr. F. W. Braches said that he had had many of this variety (the Vicar of Winkfield), and always found them stand the winter well. It is his fixed opinion, that the pear is more frequently killed by insects than by the winter. The trees are punctured by insects in the fall in the buds and tender shoots, whereby the sap becomes vitiated, and descending in the late fall communicates the virus to the entire system of the tree, poisoning it throughout. In the spring, and not before, its effects are seen; and sometimes not till July or August. This I have verified in the case of quite a number of trees I took up in the fall, in order to prevent their being winter killed; and upon observing them in the spring, they exhibited precisely the same symptoms as those remaining in the ground. This fixed itself in my mind as a clear proof that it was not winter, but insects in the fall, that are so fatal to the pear. The only remedy seems to be watching the parts punctured by these insects, which exhibit a black spot in the bark which gradually spreads into the wood, forming a more extended surface on the bark, and assuming the appearance of a dark blotch, which gradually spreads down the limb to the body of the tree. If these infected spots are cut off in the fall, the tree may be saved. Mr. Airy called for information as to why the minutes of the former meeting had not appeared in the "Valley Farmer." He was one of those who urged the immediate publication of the minutes, and he wished to know where the fault of their non-appearance lay. The President said the proceedings were prepared in good time. He had seen the editor of the "Valley Farmer," who said they were crowded out in consequence of publishing Mr. G. Husmann's Essay on Grape Culture, which had been in hand three months, but that it would not be so again. Mr. Kittredge moved for the election of another Vice-President under the New Constitution; whereupon, the ballots being cast, Mr. J. C. Blakey, of Eureka, was declared elected Vice-President. On motion, the meeting adjourned for dinner, till 2 o'clock.

AFTERNOON SESSION,

Was commenced by the distribution of the box of seeds presented by Messrs. J. Garnett & Co. The President urging that the whole particulars of time and mode of planting, soil and modes of culture, be noted, and report the results so as to furnish them to Messrs. Garnett & Co.

The wine presented by Mr. G. Husmann was then given to the Executive Committee to be tested, along with the letter accompanying the wine, desiring it to be compared with Catawba after the Committee had tested it. It was tested by all present. Information was called for concerning the articles submitted to the Society by several members. Mr. Blakey stated that plants from which the boquet presented by Mrs. Blakey had been gathered, were placed in the cellar in the fall, and produced their fine blooms with no other attention than watering. Mr. Braches said he sowed his turnip seed at different times. Those sown in May did not do well; those sown on the first of July were large fine turnips; those sown in August were not so large. Likes the Swedish very much.

Mr. Harris said the White Neshannock brought 8 to 10 cents more per bushel than the Blue Neshannocks; while the Blues yielded about one-fifth more of a crop. The Whites are best in fall, but the Blues improve in the spring. He cut off the point and planted only the cuts from the stem part.

The subject of manure was then taken up. Mr. Airy thinks the true method is to keep the lands up by a rotation of crops, and manure will not be needed. This has done so well in cases coming under his own observation, that he is convinced it is the true policy of the farmer.

Mr. Votaw found that the more manure he applied in the proper time and manner, the more potatoes or other crops he gets. A member thinks that change of crops is best; but he forgets that the great value of this change is in the straw, stubble, cornstalks, roots, &c. that are left on the soil; and if these were mixed with droppings saturated with urine, and thoroughly composted, it would be far better.

Mr. Pelton said that he had seen on lands much poorer than these, a succession of crops raised for 50 years; and by judicious rotation, they raise better crops and are in better condition than here. They rotate their crops, and plow clover under every third or fourth year. A system of thorough cultivation is as essential as manuring. This mode of plowing clover under, is the best and cheapest that can be tried.

Judge Becker said, as to applying manure to the potato, it should be well rotted and mixed with the soil before the potato is planted. If it comes in contact with the set, it rots it. In the place he came from, they had a law which compelled every person to save the waste of the household for manure; and in stabling their cattle, they attached more value to the liquid than to the solid portions of the manure. They conducted the liquid portion into cisterns, and applied

it to the land in summer from carts like street sprinklers. The solid manure they kept in cellars under their stables, which prevented the loss of the gasses by the rain and atmosphere. In spring it is drawn out to the field, made up in heaps to ferment, and is not applied to the land till the strong heat is out. In Liebig's treatise, he says the urine is the best. It is the strongest in the essential salts, and is entirely free from any objection arising from the seeds of weeds being deposited along with the manure.

Mr. W. Brown was called upon for his views on this question. He would state what had come under his observation as to manuring. A large quantity applied is dangerous. Frequently applied, and in small quantities, insures regular crops and keeps up the condition of the soil. On some of these lands, you could get 100 bushels to the acre, where you do not get 25. If you apply it in large quantities, in an unfermented state, it will, in the first instance, do injury instead of good. It seems hard to get manure at this distance from a city; but, by wintering the cattle in sheds and yards upon the straw, you get it to absorb the waste and become the best manure.

The Executive committee presented the following report upon the NORTON WINE: "Resolved, that the thanks of this Society are due, and are hereby tendered to Mr. Geo. Husmann, of Hermann, for the presentation of a bottle of wine made from the Norton Virginia Grape. Resolved, that we deem the Norton's Virginia, all things considered, superior to any other variety of native wine with which we are acquainted. The Committee would say, further, that they consider the Norton's Virginia a variety so distinct from our other native wines, that it does not come into competition with them. Standing, as it does, at the head of the dark colored class of wines, it will doubtless become an important article in our consumption and commerce.

L. D. MORSE, Chairman Ex. Com."

On motion, the foregoing report was adopted.

On motion, Resolved, that the thanks of the Society be presented to Messrs. John Garnett & Co. for the valuable box of imported garden seeds presented by them for distribution by the Society, with the assurance that everything shall be done to test them fairly, and report the results at the proper time.

The Executive Committee reported as a subject for discussion at the April meeting, POTATO CULTURE. Adopted.

On motion, Resolved, that the Executive Committee get 200 copies of the New Constitution and By-laws printed. Adopted.

The President announced the next meeting to be held at the house of W. C. Paffrath, at Sunhill, near Melrose, on the first Thursday of April.

On motion, the meeting adjourned.

WILLIAM MUIR, Secretary.

CULTURE OF THE STRAWBERRY.

A correspondent has requested us to give some information in regard to the culture of the strawberry, and also the method of treating young trees. The great press upon our columns in the present number admonishes us to be brief, and as the subject has been so frequently and so fully discussed in the *Valley Farmer* on former occasions, we have now but little that is new to add.

Formerly the most productive kinds of the strawberry were confined to the *pistillate* sorts. Recently several most valuable seedlings have been produced that have perfect blossoms, requiring but one sort to produce a full crop. At the head of these is Wilson's Albany—a prolific bearer of large fruit and of excellent flavor. Where this variety can be had, it is useless for ordinary culture to add other kinds. Some new seedlings are offered at exorbitant prices, which it will do for amateurs to purchase, but until their superior qualities are established we would not advise our friends to risk their money in the purchase of plants.

A moderately rich, moist soil is best for the strawberry. A spot that is clean, free from weeds and grass, should be chosen; trench or break up deep and mellow; if manure be added, let it be rich earth from the woods, with a slight dressing of wood ashes, or old stable manure free from grass seeds. For garden culture the plants may be set in rows twelve or fourteen inches apart or twice this distance, and the runners directed so as to finally stand a foot or more apart. Wilson's Albany, or Longworth's Prolific (a similar variety with perfect blossoms) yield much the largest berries, and the largest crops: to be kept in hills or drills, by cutting off the runners in the after culture. Our old favorite pistilate kind, the Neck Pine, or what is better a seedling from it, cultivated in extensive fields by the Society at Pleasant Hill, Kentucky, yields immense crops of good size and excellent fruit when the vines are allowed to run together, but the sorts recommended above will do better when kept in hills or drills. After planting in a well prepared soil, success is only secured by clean and careful after culture; with this the same land planted in potatoes will not yield more bushels. It is therefore clear that no labor in the garden is more profitable than in the culture of this delicious fruit.

TREATING YOUNG TREES.

The request of our correspondent seems somewhat indefinite. We have, from time to time, quite fully discussed every department of tree culture in the columns of the *Valley Farmer*. We will presume, however, that the trees are now planted on ground well prepared according to the directions previously given, and as laid down in many of the nurserymen's catalogues. If the trees were not pruned at the time of planting, one of the most important duties now is to cut back the branches in proportion to the shortening and injury done to the roots in the act of removal from the nursery, laying the foundation for an open, well-balanced head. Young trees planted the present spring, should have a covering of old straw, hay or other litter, laid around the roots three or four inches deep, in a circle, say two feet on all sides, after first digging up the ground mellow and light. Neither grass, oats, or other small grain should be grown in a young orchard. Some low growing crops, like field beans or potatoes, or other root crops may be grown among the trees. Clean mellow culture, is no less important during the first six years after planting a young orchard, than it is for the most delicate and valuable annual crops. We will discuss other points of tree culture in future numbers, when our columns are less crowded.

NEW MODE OF GRAFTING.—The French are practicing a new method of grafting, a knowledge of which may prove valuable to American horticulturists, inasmuch as it can be performed at any season of the year when sound matured

buds can be had, whether the sap is in a flowing state or not. It is performed by removing a small piece of bark and wood, leaving a smooth and flat surface, to which a similar piece containing the bud, which is to form the future tree, is fitted, which is sealed over immediately with collodion. This forms a strong, impervious cuticle, which secures a free circulation of sap on the approach of warm weather, and a perfect union of the parts.

[Written for the Valley Farmer.]

REMARKS ON THE CULTURE OF THE CINERAREA.

This plant appears to be very little grown here, although, from its beauty and variety of colors, it is one of the most attractive objects of the greenhouse in early spring, embracing as it does, every shade and tint of color, from the deepest purple and crimson to pure white: and the edging of some of the varieties of this plant are exceedingly beautiful: and being a plant of easy cultivation, renders it still more desirable.

To raise plants from seed, the seed should be sown in September, in shallow pots or pans, well drained. Sow the seed very shallow, scarcely covering it, in a mixture of three-fourths leaf mould, and one-fourth sand. When the plants are up, and can be conveniently handled, transplant them into three inch pots singly, in a compost of turfy loam, leaf mould and a little sand. A few pieces of charcoal, broken up about the size of a nut, added will be found beneficial. Stow away on a shelf, as close to the glass as possible, to prevent them from being drawn up weakly. As soon as the plants have well filled the pots with roots, they may be repotted into five inch pots, in which they may be allowed to bloom, when the cultivator will be amply repaid for any little extra labor he may have bestowed upon them. If it should be deemed desirable to perpetuate any of the varieties that are extra fine, this may be done by cutting out the bloom stalk as soon as done blooming to induce the plant to push offsets. These may be taken off and treated as above, keeping them well shaded through the Summer, and having frequent recourse to the syringe to keep down the ravages of the red spider. J. H.

St. Louis County, Mo., Feb 8th. 1860.

COMPARATIVE VALUE OF DIFFERENT KINDS OF GRAPES.—The annual convention of the Connecticut grape-growers, was held in New Haven, January, 13th. After a lengthy discussion in relation to the different kinds of grapes which should be recommended by the Society for cultivation, the following classification was made, according to their relative value: 1st, The Diana. 2nd, Isabella. 3d, Hartford Prolific. 4, Concord. All the members not concurring in this classification, a ballot on the question was taken, and stood as follows: 1st, Diana. 2nd, Hartford Prolific. 3d, Concord. 4th, Isabella. The merits of the Concord and Isabella were then discussed, and the Isabella was placed third on the list, and the Concord fourth.

These are the prominent varieties suited to the northern portion of the grape-growing region. With us the order of merit, except the Diana, would stand more nearly correct by being reversed, and placing the Isabella last. The Concord is found to be more exempt from disease than the Isabella; and, when well ripened, is quite a good grape.

Hewe's Virginia Crab, and Harrison Apples for Cider.

S. L. M. Chillicothe, Mo., makes the following inquiries as to the relative value of Hewe's Virginia Crab, and the Harrison apples for cider:

1. Which is the hardiest?
2. Which is the largest and surest bearer?
3. Which makes the best-keeping cider? the cider to be left in well-bunged barrels.
4. Is the demand for either article of cider sufficient to justify the culture of large numbers for cider market?

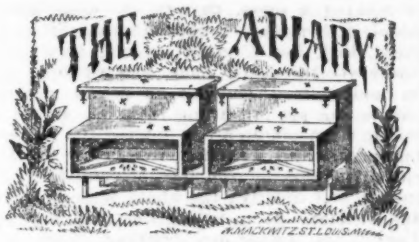
We answer: 1. Hewe's Crab is hardy, and on high, dry ground will yield a crop when almost any variety of apple bears. The Harrison is the strongest rooted and the hardest wood of any of the apples, and is an abundant bearer in a more northern climate, also bears well with us—but the Hewe's Crab being a Southern fruit has generally received the preference, though with equal care the Harrison is not inferior to it.

2. The Hewe's Crab is *small*, the Harrison is classed *medium to small*, perhaps one-third larger than the Hewe's Crab, both abundant bearers. Harrison is a sound fruit, and keeps long.

3. Hewe's Crab makes a high flavored cider unsurpassed by any other, and retains its soundness a long time. We have drank it at Economy, Pa., made by the Society under the late George Rapp, that was several years old, and would be mistaken by many for wine, and was superior to much of the cheap pure wine. It sells in the West from $6 to $12 per barrel.

The Harrison, makes a cider of great body, containing more alcohol than the Hewe's Crab. In the New York market it is esteemed above cider from any other variety, and sells from six to ten dollars per barrel. Mixed with a small proportion of the Campfield apple, makes the well-known "Newark Cider." Treated as Champagne and put up in the same manner, thousands of bottles of it are sold under the brands of the genuine imported article.

4. Any quantity of cider from either of these apples, if well made and properly treated, will find a ready sale at the prices named above. A proper soil, and high, favorable situation, will afford abundant crops of both these varieties, when apples of any kind do not fail.



HINTS FOR THE MONTH.

BY J. W. QUIMBY.

EDS. VALLEY FARMER.—I propose in this article, to talk about moving bees in the spring, feeding, hives, boxes, &c. Bees may be moved as long as two or three weeks after setting them out, if to a distance of two miles or more, though it is better to do this as early as practicable. To prepare for moving, invert the hives, cover the open bottom with muslin or wire-cloth, and stop the holes with pieces of cobs or grass. Move on springs; or, if you have a large number, take an ordinary lumber waggon. Extend the connecting rods until the axles are twelve or fourteen feet asunder; put two or three elastic planks between the stake; and on these, midway between the forward and hindmost wheels, construct a platform large enough to hold thirty or forty hives of bees. Of course, a smaller vehicle may be made on the same principle. When there is snow, a sleigh in two parts is very convenient; and it may be used without the long rigging. When the bees have reached their destination, set them on stands six or eight feet asunder if it is late in the spring—two or three will do if it is within a day or two after being set out from the cellar; loosen the cloths on the front lower edge, raise the hives half an inch or more, and let them stand for five or ten minutes, when they may be raised and the muslin taken out without difficulty.

Bees often require feeding in the spring. To decide when they are reduced to the last extremity, go to them early in the morning, and give the suspected hives a smart tap with a light hammer or stone. If the bees answer with a brisk, lively buzz, you may conclude that they are good for twenty-four hours more; but, if they fail to respond, they are probably too weak from starvation. In such case, take them to a warm room, invert the hives, and pour a quantity of honey or sugar water on the combs and among the bees. An ounce or two will be sufficient at first. As they begin to revive, confine them as you would for moving. It is not a good policy that allows bees to come so near starving as this. Ordinarily, if, in your judgment, bees ought to be fed, take them to a dark room, invert the hives, place pieces of empty comb flatwise on the edges of the combs in the hives, and pour strained honey on them. The empty cells will hold a sufficient quantity. It is rarely, if ever, best to feed in the open air, as this is apt to set the bees to robbing, and to feed all those in the neighborhood as well as your own. When the bees are active and the weather is not too cold, they may be fed by making holes in the top of the hive; if there should be none already, setting near them shallow vessels containing honey mixed with shavings or sawdust to prevent the bees from drowning, and covering the whole with a wooden box to exclude neighboring bees. To avoid the danger of robbing, it is better, when practicable, to feed in the night. It is sometimes necessary to feed bees as late as the period between the fall of the blossoms of fruit trees, and the opening of the white clover harvest,

Hives for swarms, and boxes for surplus honey, should be made ready in the spring, if not before. It is much too late when the time has come to use them. I would recommend beginners to use the box hive first, on the top of which boxes may be placed for surplus. These hives should contain about 2,000 cubic inches each in the latitude of N. Y. The boxes may be made of wood, unplaned on the inner side, if the honey is intended for home consumption; but if for marketing, boxes should be of glass. Make the tops and bottoms of wood, also the corners, and fasten panes of glass of proper size to the sides with tacks or tins. Six inches square by five in hight, is a very convenient and saleable size. Stick pieces of comb to the tops, with melted beeswax, for the bees to commence upon. Such glass boxes, when used, must be covered with rough wooden ones to exclude the light.

ST. JOHNSVILLE, 1860.

HONEY DEW.

EDS. VALLEY FARMER:—This important and curious phenomenon, "The Honey Dew," is attracting the attention of your readers. It happens well at this season, as affording ample time to make the arrangements necessary to go into a series of well authenticated experiments and observations on the subject during the ensuing season. Your correspondent A. H. F. Payne, passes the insect theory too lightly. He ought to give some more data if he intends to correct the observations of W. Towend Glover, in his valuable report on insects, pages 69 and 106 of Patent Office Report on Agriculture, for 1855. Where he says, writing of the ant: "Many planters suppose that these ants are the parents of the lice. Others, again, suspect them of destroying the aphis; neither of which, however is the case, as the ants merely visit the colonies of lice to devour the sweet, gummy substance that exudes from the tubercles on the bodies of the aphis, which is commonly called "Honey Dew," from the erroneous impression that it is formed in the atmosphere, and then deposited in the form of dew upon the upper surface of the leaves. This honey dew, however, is a sweet liquid ejected from the anal tubercles of the cotton-louse, and elaborated in its own body from sap which had been previously extracted from leaves or young shoots; and which, if not immediately devoured by ants, is ejected by the plant louse, and falls in drops upon the upper portions of the leaves that are beneath." Messrs. Editors, I beg to suggest the importance of having this subject inquired into: and, if possible, set at rest by a series of well conducted experiments and observations during the ensuing season. Could not all of your readers, and others who take an interest in this subject, observe and record the times, places and circumstances under which this honey-dew is found; collect samples; observe if there are certain varieties of vegetation on which it abounds at the same periods in greater quantities than others; obtain specimens still on the different kinds of vegetation, and on paper and glass if it falls from the atmosphere on the ground. Were all the circumstances connected with this phenomenon furnished to the officers on appropriate committee of the Missouri Fruit Growers' Association, and by them collected and arranged in the form of a report, it might be a means of gaining a mass of information upon the subject not otherwise attainable—and of interest to all. This refers not to Missouri alone, but to wherever the honey dew is found. Hoping some action will be taken on the subject, I leave it for the present. CERES.

ANCIENT PEAS.—At a meeting of the New York Horticultural Society, held in Clinton Hall a few weeks since, the President exhibited some sweet peas, which were taken, it is stated, from the breast of an Egyptian Mummy, and are about three thousand years old. These seeds were presented by Prof. S. B. Morse, who made the above statement concerning them. He, moreover, stated that some of the same kind had been planted, and that they vegetated. They are of a dark brownish color, somewhat shriveled, but of good size.

HOME ART.

We believe in art at home, and would recommend its culture and practice in every household which the *Valley Farmer* visits. We do not mean by this, to interfere in the least with the art of the studio and orchestra. Let the sculptor chisel at Rome; let the painter mimic nature where he will; let the musicians practice and cultivate their art where they can. The more they do to elevate art, adorn the world and cultivate the taste of men, the better. We would not narrow their sphere or limit their operations. We would rather extend the sphere of art to every household. We would not recommend that everybody should attempt to work in marble or paint, or devote their days to music; though the principles of these fine arts might be well studied and practiced upon in every home. But the *useful arts* are our delight and theme—those which relate to making, taking care of and adorning a home.

First, a home must be made; a location sought; a house built; inside and outside arrangements completed. In this work, art should have a hand. The place should be chosen with taste; the view good; the soil dry; the locality easy of adornment, without unsightly sloughs and mud-holes about it; sloping to drain readily; high to be healthy, and afford a good prospect. The house, though but of logs, should be neatly made. Taste and skill—real art may exhibit itself as well in the building of logs as of marble. The arrangement of doors, windows, rooms, cupboards, closets, conveniences and comforts should all be made with a view to good taste. They may as well have a look of finish and refinement, as of roughness and botchery.

When the house is finished, it must be furnished; and this is a field for taste. The skilful housewife with good taste and artful fingers, will make a very plain house look cozy and homelike. The beds will be works of art; they will be clothed and made in taste. The curtains will be tasteful, and put up in order. The furniture will be so arranged as to give the best effect and occupy the least room. Everything will be in place, clean and pleasant as it can be made. Out-doors there should be a similar effort at art. In grass-plats, in yards, fences trees, shrubbery, vines, cleanliness and order, art may do its perfect work. Then comes the dress. Art in making, art in mending, art in wearing, cleaning and preserving, may always be practiced. There is more in the set and taste in making a dress, than in the materials of which it is made. Broadcloth and silk badly made, look less pleasing to good taste than linsey woolsey neatly made, and tastefully put on and worn. There is an art in wearing clothes, an art in putting them on, an art in taking them off, an art in folding and preserving them. Still further there is art in keeping clean; in keeping the teeth clean; the hair smooth and orderly; the whole person comely and tasteful. So in setting the table, carving, dishing out, eating and drinking, there is a sphere for art. Indeed, everything about the household may be directed by good taste and display the principles of real art. A gentleman or lady will sit gracefully in a chair; while a clown or a shrew will sit like a house in a hubbub. The finest field for art is the household.

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[Written for the Valley Farmer.]

Letter from a Country Girl.

BY NELLIE.

BIRDSNEST, April, 1860.

Dear Cousin:—I could hardly wait to finish my morning duties, so anxious have I been since the arrival of your letter by last evening's mail, to dispossess you of the false notions you appear to entertain concerning country life and manners.

I fancy you would withdraw your sympathy as misapplied, could you see me as I while away "the lonely hours" of my "*exile*," as you are pleased to term it. Really, I had to laugh over your dolorous inquiry, "How do you contrive to exist?" *Exist*, indeed? Oh, Julia, I never knew what life—free, glad, beautiful *Life* was till now!

Here, among Nature's wildest haunts, I do not need a gallery of art to cultivate my taste for romantic scenery; all around me are pictures traced by the hand of the Great Artist, whose works a Raphael may imitate, but never equal; the shading is exquisitely soft, and the disposition of light faultless.

There are skies that would vie with those of Italy; rugged hills and quiet valleys; silvery streams, pebbly pools, laughing rills and mossy dells; old gray rocks, grassy slopes, deep, dark woods and hanging vines.

There are figures, too, in these scenes: grazing herds crop the grass upon the hillsides, or drink from the limpid brook, sometimes wading into its cooling depths, where they will stand and chew their cuds with an air of contented ease; birds soar in the clear ether, their burnished wings flashing anon in the sun; the plowman follows his stout team, and guides the glistening steel as it turns up the fresh, brown furrows; and, for a foreground group, you may imagine a huntsman, with his hounds, or, if you prefer, a group of equestrians. Do you ask who is that gay little gipsy riding so fearlessly, laughing so gleefully, and seeming the very embodiment of health and happiness? Beg pardon, Ma'am! must I introduce myself? It is your pale little cousin enjoying her "*exile;*" with cheeks painted by the mountain air, a figure braced with out-of-door exercise, and a heart as light as a bird's.

So you think I must pine for concerts, balls, and plays? Oh, if you could but attend some of *our* concerts out in the leafy grove, where music such as Parodi never dreamed of, shivers the fragrant air; as robins, bluebirds, orioles, thrushes and martins, led by the mellow-toned lark, pour forth a tide of melody that rises and swells, and floats and sinks, and dies away in a softly thrilling cadence; when Bob Lincoln cheers and whistles till he calls them out again, and they repeat their oratorio or single out some loving pair to sing a favorite duett; and Bobolink cheers again till the mocking bird appears, to give a synopis of the whole in one of his inimitable chorusses. I am awakened every morning by the matins of the lark; and am serenaded every night by a love-lorn whippowil.

As to balls, you should see how country people can dance. They enter into it with heart and soul. I used to think city parties very fine; but, for a real, sociable, joyous, fun-inspiring festival, give me one of our country frolics.

Plays—I must imagine. I sometimes sit upon the door-step of a moonlight evening and fancy a troupe of fairies performing stage antics beneath the peach trees, which are all aglow with blushing beauty now. Oh, you should see them! The orchard is a sea of pink billows, with here and there a white cap; and when the sun breaks out after one of the showers which April almost daily weeps, and the blossoms, the young foliage and the tender grass are decked in jewels; when the breezes waft the fragrance in at at my little window, and the bees come out into the sunlight with a cheery hum—Oh! Julia, I think my dear, delightful, quiet, home, the loveliest spot on earth.

There is a colony of swallows under the south gable of the barn; and a dear, little, Quaker-like *Phebe* has built a nest in the back porch.

Old Malta seems quite contented in her new home, and is more dignified than ever since she has assumed the responsibilities of a mother. She is justly proud of her two darlings; they are the cunningest little roly-poly, blue-eyed, velvety creatures you ever saw. One of them is as white as snow. I call her *Lily*.

Old Hero enjoys country life as well as any of us. Sometimes he goes out with father on a hunting excursion; but the greater part of the time he lies stretched upon the door mat, or out upon some little patch of sunlight on the grass—the dear old lazy fellow! I pull his ears as much as ever.

I have set the old speckled hen to-day upon thirteen eggs; and in three weeks I shall expect a brood of little downy chickens, of all sorts and colors.

My crocuses bloomed finely; my daffodils and hyacinths are the wonder of the neighborhood; the tulips, narcissus and crown imperials are bursting their buds; and the lilacs, and syringeas give promise of a cloud of sweets.

I meant to have told you about my pony, and the calves and lambs, and a maple sugar frolic that we had in the woods; but here it is ten o'clock, and I promised Mother that I would see about the dinner.

So, good-bye! Write often; and rest assured of the constancy of your happy little cousin,

GUSSIE GAY.

A CHAPTER ON TEETH.

BY CHARLES A. FENN.

EDS. VALLEY FARMER:—Among our greatest blessings, such as good health, a clear conscience, a full purse, &c. &c. we can very appropriately class a good set of *natural* masticators. But, alas! like all the gifts bestowed upon us by a beneficent Creator, they are seldom appreciated until we are deprived of them.

Who that has rolled and tumbled, and tossed and scolded, and grumbled, and *thought* hard words, from "dewy eve" till the "wee sma' hours," with an old stub of a tush, and a face the size of a pumpkin; who, I say, after passing a night of such inquisitorial horrors, would not agree with me in the assertion, that a good set of teeth is about as conducive to a person's comfort and well-being as any one thing we can mention.

And yet, I presume, there is nothing that is more neglected and abused, among the larger class of people in this country, than are these same pearly aids to good behavior. They are used for cracking nuts and biting hard substances, like candy, ice, &c.; hot drinks are poured over them; calomel, acids and other injurious medicines, are taken into the stomach for the good (?) of the body, without a thought of the vast injury they are doing to the groundwork of digestion, viz: the teeth. Then the tartar is permitted to accumulate until the gums become diseased, and of course the teeth become loose and unreliable.

If the old adage, "a stitch in time saves nine," can be applied with force to anything, it may be to a spot on a tooth where decay has begun its work of destruction. A dentist could then cleanse the trifling cavity, fill it with gold and make it as good as new, with very little expense and no pain to the patient; whereas if it is let alone the insidious work of decay goes slowly but surely on, until the poor victim is made aware of his error and neglect, by a twinge that nearly takes his breath: and then he has to choose between the delightful operation of having his head (as he verily believes) caved in, smashed up and hauled out, in the shape of an old grinder, for which *soul-refreshing* process he pays about the same it would have taken to make it all right in its first stages; or paying from five to ten times as much for having the gaping excavation filled.

To be sure, in the latter case, he has the pleasure of sitting in the operating chair several hours, while the dentist digs, and scrapes, and chops, and pounds, and hammers, till the tortured sufferer feels as if his mouth was the main thoroughfare of some city, well paved with cobble-stones, over which drays, cabs, omnibusses, &c. were driving at 2:40 speed, while the operator resolves himself into a dozen burly Irishmen, breaking rock for dear life. Ugh! have'nt I been there?

Now, I sincerely believe that it is, if anything, more necessary to secure the services of

a good family dentist than those of a physician; for, while Mother Nature often accepts of our co-operation in treating ordinary cases of disease, and we see the invalid convalescing under the tender nursing and watchful care prompted by the instincts of affection, she locks the mysteries of dental lore in a laboratory, the very threshold of which we may not pass. We *may* do our own doctoring, but not our own dentistry.

I would by no means have the masses ignorant of this important branch of surgical science. On the contrary, I would have them enlighten themselves by every available means, such as books, essays, &c.; and here let me say I wish every one of the thirty thousand readers of the *Farmer* could have the reading of Dr. Geo. Watt's "Prize Essay on Dental Surgery." It can be procured of any leading dentist, for the low sum of one dime; and I know any candid man will say it is worth a great many hundred times its price, for the valuable hints and suggestions contained in its pages.

And parents, if you want your children to "rise up and call you blessed," make a practice of taking them to a good dentist occasionally, and let him give their mouths a thorough examination: and do you be sure and profit by the instructions he will give you—you will find the trouble and expense is but trifling, and the good done by following such a course will be incalculable.

The teeth and mouth ought to be thoroughly cleansed every morning and evening with a soft brush, and rinsed out with clear water after every meal. A too free use of tooth powders is to be avoided; a good article of castile soap makes a fine dentifrice, and can be used without danger of scratching or cracking the enamel. If the gums exhibit any symptoms of disease apply tincture of myrrh several times a day with cotton or lint. Picking the teeth should be avoided, as much as possible, and *never* should metal of any kind be used: the best and least injurious article to make into a toothpick is a goose quill; it is tough and elastic, and at the same time it is too soft to injure the enamel.

I believe there are but few persons, even in this land noted for bad teeth, who might not, with a reasonable amount of care on the part of their parents until they were old enough to take that care themselves, carry to their graves their natural teeth in a good state of preservation.

It is absolutely necessary, in order to accomplish the preservation of the teeth, that a good dentist should be employed—one who understands his business thoroughly; and no man *can* understand this profession unless he is a natural mechanic. With that qualification, a love of the art and application combined in an operator, I should not hesitate to trust him implicitly with the care of my teeth; but to make him *perfect* in his place, he must possess all the requisites of a kind-hearted, polished gentleman.

I do not doubt that there are quite a number of just such operators in the goodly city of St. Louis; I *know* there are *some*; and to strangers coming to our town, and wanting anything done to their masticators, let me say that I can, from personal observation, recommend Messrs. Peebles & Dunham, on Fifth street, near Mercantile Hall, as combining all the above qualifications in an eminent degree, with the additional one of *experience*.

Now, dear reader, attend to this matter at once; as you may find out to your sorrow that in this instance, as in all others, "procrastination is the thief of time;" and although you may think that your teeth do not need any immediate attention, you may be brought to a sudden and realizing sense of your mistake, by one of those *awful* twinges. Ugh! haven't I felt them?

[Written for the Valley Farmer.]

OUR PET.

BY NELLIE.

She's a chubby little creature, just learning how to speak,
Her flesh is very soft and fair, her eyes are blue and meek;
Around her pure transparent brow, a halo of bright hair
Trembles at every wooing breeze, that comes to nestle there.

In melting waves, the rosy hues of health and vigor chase
Each other o'er her velvet cheek, and bathe her dimpled face,
And when she laughs, her mouth is like a rose-lined ocean shell
Half filled with pearls, from which the tides of melody may swell.

She was not born to luxury, a pampered child of wealth,
She inherits no estate on earth, but cheerfulness and health:
By dint of honest labor we contrive to get along,
Our hands are hard and brown with toil, our HEARTS are brave and strong.

We cannot clothe our "little pet" in robes of texture fine,
Or have a train to care for her, and yet we ne'er repine;
For she is just as dear to us, as trotting 'round she goes
In calf-skin shoes, that gape and show her little naked toes.

And when we get a good bright dye upon her flannel dresses,
And put her clean starched apron on, and comb her sunny tresses,
And Grandma brings the speckled hose to draw upon her feet,
We all declare there never was a cherub HALF so sweet.

O! she's a little beam of light glancing athwart our WAY,
That chases darkness from our home, with its pure, cheering ray;
We are NOT poor—we're truly BLEST while thus to us is given
This guileless child, whose presence makes our humble home a heaven.

Oh! God, forbid that our fond hearts should love the gift TOO well;
Let not our darling take the place where Thou ALONE shouldst dwell.
Lest Thou shouldst find it needful to remove her from our sight,
And with this magnet draw our hearts to realms of endless light.

ALLEGED CURE FOR FEVER AND AGUE.—The following brought from the Spanish Main, and said to be an unfailing cure for fever and ague is highly recommended by an exchange: "Just before the chill comes on have a pot of very strong coffee made and keep it hot, and when the chill is felt, pour out about a pint and squeeze the juice of a couple of lemons into it, and a little sugar to make it palatable, drink it off, go to bed and cover up warm. One trial of this often cures, whilst two or three trials never fail."

Domestic Department.

(Written for the Valley Farmer.)

BOILS.

These troublesome tumors are apt to prevail at this season; there seems to be no good place for them; they are in the way every where. A friend of mine, who was very much afflicted with them, and who received but little comfort in grandma's declaration that "biles" are always healthy! exclaimed petulantly one day, that she wished she could run the bothering things off across the bridge of her nose (she was always making fun of this rather prominent feature), and sure enough she had an immense boil on the tip of her nasal organ, and found it more in the way than ever; while grandma consoled her by avowing that she believed it to be a judgment upon her.

But I set out to write recipes. The best way to serve a boil, is to frighten it away by plunging a lancet into it as soon as it makes its appearance. But, if the lancing has been neglected, and you find yourself compelled to endure the pain of the gathering and breaking, use warm bread and milk poultices, changing them often during the process of suppuration; or, if you wish a "drawing plaster," apply a salve of yellow soap and brown sugar. A bit of fat pork is good to allay inflammation.

WASHING MIRRORS.

Wet a bit of soft brown paper, such as grocers use for wrapping teas and fine articles, in clean soap suds, and rub off all marks and spots. Wrinse with clear, soft water, being careful not to allow any to run under the frame as it will remove the quicksilver from the back of the glass; then, with an old silk handkerchief, wipe till dry. Some people polish mirrors and window glass with alcohol.

SCOURING KNIVES.

Common brick is about as good as anything. It should be pulverized by rubbing two pieces of brick briskly together till a sufficient quantity is grated off. Wet a large cork, dip it in the powder; and you can scour your knives without soiling your fingers. If you wish to give them an extra polish, finish with a bit of soft buckskin or kid, and dry brick powder. Cinders from a blacksmith's shop, are also excellent for rubbing knives.

TO WHITEN LINEN.

Now is the time, when fruit trees are in bloom, to whiten clothes upon the grass. Wet them in soapsuds; spread them out; turn them every day, and dip them in water if the day is a dry one. If they have turned very yellow by lying long away, boil them in a solution, made by melting a pound of fine, white soap in a gallon of milk. At the end of half an hour, take them out, wash them in a lather of soap and warm water; rinse them thoroughly, adding a little bluing to the last water.

TO REMOVE INK STAINS.

Wet the stains in a solution of oxalic or tartaric acid; let them dry in the sun; after which, a common washing will remove them. This, of course, will only answer for WHITE clothes, as the acid would destroy the colors of calico.

TO MAKE GOOD COFFEE.

Brown carefully in a slow oven, giving it a finishing touch with a quick fire; but on no account allow a kernel of it to BURN. Shut it up immediately in a close canister, lest the aroma escape, and grind it as you require it for use—do not grind it too fine. Mix a coffee-cupfull of ground coffee with an egg, pour over it a quart of boiling water, let it boil fifteen minutes, add half a pint of cold water, and take it from the fire. Remove the cream from a quart of milk, and set the milk over fire; when it boils, pour the coffee into it; add the cold cream, and sweeten to your taste.

FISH SKIN.

The skin of codfish nicely scraped,and washed, is a very good substitute for egg in coffee. A bit the size of a twenty-five cent piece will settle as much as an egg.

FISH BALLS.

Chop together one part of boiled codfish, one part bread crumbs, and two parts cold boiled potatoes. Moisten with cream, and season with salt and pepper. Make little patties of the mixture, and fry them slowly till well browned in pork fat.

DRESSING FOR FOWLS.

Soak good, light bread, well spread with butter, in warm sweet milk; boil the hearts, livers and gizzards of the fowls till tender; chop them very fine, and add them to the soft bread; mix well; add sage, summer savory, salt and pepper; and, if you choose, a well-beaten egg—a trifle of soda improves dressing. Let it be quite moist; dry dressing is poor stuff.

INDIAN PUDDING.

To a pint of tolerably thick cold mush, add two beaten eggs, a small cup of sugar, a tablespoonful of ginger, half a teaspoonfull of cinnamon, a little salt, and three pints of milk. Mix thoroughly with the hand. Set it into the oven, and when well crusted over, stir it well, adding half a cup of raisins, and a piece of butter half the size of an egg.

PUDDING SAUCE.

For rice pudding, sweetened cream, flavored with lemon, is a superior dressing. For Indian pudding, mix butter and sugar together till it cuts smoothly, and flavor it with nutmeg.

TO DRESS RICE.

Pick over and wash the rice, and let it soak seven hours in a solution of salt and soft water; drain it; throw it into enough boiling water to cover it, and let it boil ten minutes.

PIE CRUST.

Allow a plump, double handfull of unsifted flour to a common sized pie; rub a heaping tablespoonfull of cold lard into it; add a little salt, and cold water enough to stick the paste together. Don't work it much, and use the crumbs instead of fresh flour to roll it out in. It is best to reserve a little of the "shortening" to make a distinction between the upper and under crusts. For the cover, roll it into a little cake, spread the remaining lard over it, scatter a few of the crumbs upon it, roll it up like a scroll, and flatten it out the other way when you finish it up.

BEEF STEAK.

Have your spider heating while you are pounding the meat; let it get quite hot; drop the steak in, cover it closely; in a few seconds it will need turning. Save every particle of juice upon a platter, or it will dry up, and scorch in the spider. After giving it a quick brown, take it out into its juice, season it with salt and pepper, and cover it with thin slices of butter. It is just about as good as when cooked upon a gridiron, and this mode is certainly the easiest one. Ham should be cooked in the same way. If you want fat to fry eggs in, you can leave some to cook slowly.

POACHED EGGS.

Melt just enough butter to oil thoroughly the bottom of your spider; break in your eggs; let them fry brown without cooking too hard. When done, pour to every four eggs, a pint of milk; add salt and pepper; thicken the gravy a little, as it boils with smooth flour paste, and chop the eggs fine with a knife or spoon.

TO TEST EGGS.

Lay them into a dish of cold water; if good, they will rest on their sides; if bad, they will persist in standing on end.

TO FRY LIVER.

Cut it into very thin slices; drop it into boiling water; let it boil up till it whitens and swells into a solid form; dip it in flour, and fry in hot pork fat. Season while cooking with salt and pepper.

NELLIE.

Editor's Table.

OUR PREMIUMS.—The announcement of the names of the successful competitors for the premiums we offered for largest clubs of subscribers will be made in our May number. All those who have sent in lists will oblige us by sending in the entire list they have forwarded, that we may compare them with our books, and see that no mistakes have occurred by mail or otherwise. Immediate attention to this is solicited. No new names will be received after the first of April.

NOT TOO LATE.—"It is never too late to do good," and therefore it is never too late to send us the names of new subscribers. We have an abundant supply of back numbers from the commencement of the volume, and would be much obliged to any of our subscribers who would send us new names. Every patron, we believe, feels a lively interest in the success of the "Valley Farmer," and will cheerfully endeavor to increase its circulation by sending new subscribers and thus enlarge its sphere of usefulness and its means of doing good.

St. Louis Agricultural and Mechanical Association.

The fourth annual Fair of this Association will commence on the 24th of September and continue during the week. The Directors have determined that it shall surpass all of its predecessors, if possible. Over $20,000 will be offered in premiums and many changes and improvements in the premium list have been made. Every department has been carefully examined, and such changes have been made as would conduce, in the opinion of the Directors, to the increasing interest of this great western enterprize. This fair has yearly grown in favor, and the Directors have determined that it shall yearly become a greater and still greater success. We shall send the premium list, when published, to such of our subscribers as we think will feel an interest in this great institution. We hope every reader of the "Valley Farmer" will make his arrangements to be here at the next Fair, and believe that he will be well paid for the outlay in seeing the great improvements being made in farm implements and machines, and in viewing the choicest breeds of cattle, horses, sheep, swine, &c. and the best varieties of fruits and flowers; and, in fact, in witnessing, in every department of industry, the very best specimens those departments can furnish.

The following is a list of the Directors of this Society for 1860, viz: Capt. A. Harper, Chas. Todd, G. B. Allen, Norman J. Colman, Col. T. Grimsley, J. O. F. Farrar, Benj. O'Fallon, Henry T. Blow, Wm. L. Ewing, C. L. Hunt, Wm. Lindsay, John Sappington, Wm. M. McPherson.

The officers are Capt. A. Harper, President; Chas. Todd, Henry T. Blow, Vice Presidents; Norman J. Colman, Corresponding Secretary; G. O. Kalb, Recording Secretary.

North-Western Agricultural Society.

An incorporated Association, under this title, has been organized in Chicago, Ill., with a capital of $60,000, of which $22,000 has already been subscribed. They have purchased the "Garden City Race Course" grounds, containing 52¾ acres, for $28,000.

The officers are:—President, John A. Kennicot; Secretary, F. W. Reilly; Treasurer, E. I. Tinkam: Directors, Dr. John A. Kennicot, Hon. W. B. Egan, Henry Fuller, W. R. Loomis, William L. Church, Isaac Cook, E. I. Tinkam.

The object of the society is explained as follows:—

"The objects of this society are the promotion, protection and encouragement of agriculture and its kindred arts and sciences; the assertion of the importance of a fitting recognition of this great primary interest, so closely allied to the success not only of Chicago, but of our whole country; the erection of an Agricultural Bureau at Washington; the founding of an Agricultural College, Museum, Library and Reading Room in Chicago; the establishment of Annual Fairs and Exhibitions, and the improvement of a Park, Pleasure and Fair Grounds."

It is gratifying to witness any well-directed efforts for the improvement of agricultural and rural taste, and at no period in the history of our country has there been so many encouraging signs for these as at present, nor is it less encouraging to see City Race Course grounds purchased, and appropriated for these more wise and beneficent purposes.

KENTUCKY STATE AGRICULTURAL SOCIETY.—At a meeting of the Board of Directors of the Kentucky State Agricultural Society, it was resolved to hold the next annual fair at Bowling Green, beginning on Tuesday, the 18th of September next, and to continue five days.

It was also ordered that $1,500 be appropriated to aid in holding exhibitions of tobacco at Louisville and Paducah, in 1860—the amount to be equally divided between the two places.

Messrs. W. L. Underwood and E. M. Covington were appointed to deliver public addresses at the tobacco fair in Louisville, and Messrs. James Campbell and W. B. Machen, at Paducah. The days for holding the tobacco fairs have not yet been fixed. It was further ordered that Gov. Beriah MaGoffin be requested to deliver the annual address on the 2nd day of the Fair, at Bowling Green, on the 19th of September next.

GEOLOGICAL SURVEY OF KENTUCKY.—The legislature of this State closed its labors and refused the appropriation necessary to continue the geological survey—the most important measure that was before that body during the entire session—while private and local matters occupied the largest portion of the business of the legislature. Many of the acts passed were of the most trifling character. We sincerly hope that at the next election men will be chosen who can comprehend, and who will honestly support matters of vital public interest to the State, and that this great work that has developed so much of the real riches of the State may be continued uninterrupted to the end.

Report of the Third Annual Fair of the St. Louis Agricultural and Mechanical Association.—We learn that this interesting and attractive report will soon be issued. It will be illustrated by many of the machines, implements, &c. exhibited, and also by the premium horses, cattle, &c. Those wishing to obtain the report should enclose a letter stamp to prepay postage, and address G. O. Kalb, St. Louis, Mo.

An Agricultural Bureau at Washington.—It has been determined at Washington to separate the department of Agriculture, formerly under the control of the Patent Office, and establish for it an independant Bureau, under the supervision of the Secretary of the Interior. We understand that the superintendance of this department has been tendered to Col. B. P. Johnson, the accomplished Secretary of the New York State Agricultural Society. We also understand that Col. Johnson, deeming his present position for public usefulness, fully equal to that which would be afforded at the seat of the general Government, has thought proper to decline the honor tendered him. We should be glad to see this important and responsible department at Washington placed under the immediate supervision of a gentleman as efficient and capable as Col. Johnson, yet we should regret to miss him from the position he has so long and so ably filled, with credit to himself and with so much benefit to the great agricultural interests of the State of New York.

Meeting of the American Pomological Society.—The Hon. Marshall P. Wilder President of the American Pomological Society has given notice that the next biennial meeting of this Society will be held at Philadelphia, Pa. commencing Sept. 10th.

Fair of the New York State Agricultural Society.—At the meeting of the New York State Agricultural Society, held in Albany, it was determined to hold the next fair at Elmira, on the 2d, 3d, 4th and 5th days of October next.

Timothy on New Prairie—Potatoes.

Eds. Valley Farmer:—In your last issue two subjects are mentioned, on which, perhaps, my experience may be of service to others, i. e. sowing Timothy on prairie sod, and raising potatoes.

In May, 1853, I broke up a piece of raw prairie, harrowed it well, dropped corn by stakes, and covered with a hoe. The crop received, and needed no cultivation. It was not measured; but the lowest estimate per acre was 50 bushels. In October, the corn was cut up and put in shocks 16 hills square. The ground was then harrowed both ways, sown with Timothy seed—one bushel to six acres—and afterwards brushed. The next year, I mowed on that ground one of the best crops of grass I have ever raised.

Last spring I planted eight rows of potatoes 100 feet long across my garden. The ground was well manured and plowed, then harrowed, and a light furrow opened about 2 inches deep, in which the potatoes were dropped 8 inches apart. They were then lightly covered with earth, and then covered about 6 inches deep with wet straw from the stack yard. No further labor was bestowed on them. We commenced using them about the 20th of June; and used them regularly on till digging time, when we took up 7 bushels. My family ranges from 12 to 20 persons. One great advantage in this mode of culture is, that you raise the straw and pick off the ripe potatoes without disturbing the others, just as one would gather melons from a vine.

Have you, or any of your correspondents, tried Hungary grass as a pasture for hogs after it has matured? Yours truly, F. B. S.

Hazelside, Marion Co. Mo.

Breeding Mares should not be Pastured on Green Rye or Clover.—Eds. "Valley Farmer:" A subscriber wishes to know if green rye is unfavorable to the gestation of brood mares. I can inform him it is to a certainty. I have had much experience in breeding mares, and know positively that rye and clover are highly injurious to mares in the breeding season. It is rarely the case that a mare will produce a foal that runs on a rye field or clover pasture. It does not abate their amativeness; on the contrary, makes them more amorous. I see it stated in some agricultural paper, that eggs will not hatch if conveyed by railroad. We have an instance in this village to the contrary: A gentleman here brought 22 eggs of a breed of fowls called Bolton Grays, from Massachusetts, 800 or 900 miles by railroad, and raised fourteen chickens from them. Florisant.

St. Louis County, Mo.

Prices of Farms and Stock in Kentucky.—We copy a few items of recent sales. A farm three miles from Shelbyville, of 234 acres, sold for $74 40 per acre; an unimproved farm of 108 acres in the same county, for $50 per acre; a farm one mile from Mt. Sterling of 330 acres at $93 15 per acre; another of 160 acres at $125 per acre. In Bourbon County, two-year old mules brought from $80 to $125 75. Two hundred Mexican mules brought $80 20 per head.—One auctioneer sold 14 horses at an average of $134 85. In Scott Co. 50 mules sold for $155 each. In Madison County, 250 hogs on foot, averaging 434 pounds, were bought at $4 per 100, gross.

Wool.—The history of the growth of wool is very curious. Fifty years ago not a pound of fine wool was raised in the United States, in Great Britain, or in any other country except Spain. In the latter country, the flocks were owned exclusively by the nobility, or by the Crown. In 1794, a small flock was sent to the Elector of Saxony as a present from the King of Spain—whence the entire product of Saxony wool, now of such immense value. In 1809, during the invasion of Spain by the French, some of the valuable Crown flocks were sold to raise money. The American Consul at Lisbon, Mr. Jarvis, purchased fourteen hundred head, and sent them to this country. A portion of the pure unmixed Merino blood of these flocks is to be found in Vermont at this time. Such was the origin of the immense flocks of fine wooled sheep in the United States.

Notice to Secretaries of Horticultural and Agricultural Societies, and Fair and Lecture Committees.

The undersigned having some time at his command during the coming year, will undertake to report and prepare for the press, Discussions, Lectures, &c., in connection with Horticulture, Agriculture, or Scientific Subjects, through the Western States.

For particulars, apply to WM. MUIR.

Laborville, Melrose P. O.

St Louis County, Mo.

QUESTIONS ANSWERED.

W. G. K.—"A young farmer" has asked a series of questions, which we will endeavor to answer as far as we are able.

BEST PLAN FOR HEN-HOUSE AND BARN.—We would refer our correspondent to Allen's Rural Architecture for a variety of plans for dwellings and farm buildings. It would be difficult for us to furnish the "best plan" for a barn without knowing the extent of the farm and the character of the farming, whether chiefly for grain, or for stock or dairy purposes. The book with others of a similar character is advertised in the "Valley Farmer."

SUB-SOIL PLOWS.—There is not much variety in these—the best are those that are strong, and run sufficiently deep at the least expense of power. Price, about $13.

CORN PLANTERS.—There are a great variety of these, some valuable, but more that are worthless. Barnhill's, we regard the best that we have used. Price, about $15.

CULTIVATORS.—The common steel five-tooth, is as good as any. Price, from 5 to $7. These implements may probably all be had at the implement stores.

SPRING AND WINTER BARLEY.—The time for sowing Spring barley, is about the proper time for sowing oats. Fall barley is usually sown about when wheat is. Time to harvest—when it is ripe.

We are not familiar with the kind of grass alluded to. If it possessed great value the world would likely, long since have known it. It probably belongs to that class of humbugs with the "Honey Blade" grass. Beware of all these and their rascally authors.

BUCKWHEAT.—C. F. S. wishes to be informed how to prepare land for buckwheat, time to sow, &c. Prepare any clean good land as for wheat or barley. It is suited to light land, and may be sown in July. It is sometimes sown on land after wheat has been harvested. Half bushel of seed is the quantity usually sown on an acre—we should prefer something more.

FOOD FOR BEES.—G. W. J. of Arkansas, makes inquiry in regard to the kind of food for bees, alluded to in an article published in the "Valley Farmer," for December, 1859, from the "Mark Lane Express" (London).

The Til seed alluded to, we presume, is the seed of the Bene Plant (Sesamum Orientale). These are grown for making oil, as described in the case of the Til seed. The cake when wet up with water, makes a food that the French describe as being highly relished by bees. We doubt its value for making honey—we do not know that the seed can be had in our Western seed stores. It may, probably, be had of John Thorburn & Co., seedsmen, New York City.

BASKET WILLOW.—T. O. of Illinois, inquires whether the basket willow will grow on land which is sub-merged most of the time, from March until July, &c.; where the cuttings can be procured, &c.

Willow will grow on almost any good soil, but prefers a moist soil. It succeeds on the sides of ditches, but land sub-merged for any considerable length of time after spring opens, would be injurious to it.

The cuttings should be planted early, before the buds swell, say during any mild weather in February, or early in March.

There are a number of kinds of willow used for baskets. Some years since we procured the best kind cultivated, and set a plantation of it near the city of Louisville, Ky. Cary, Peter & Cary, Nurserymen, whose post-office address is Louisville, have the cuttings for sale.

We do not know the price of the prepared article in market. Large quantities are imported from Europe, paying freight, commissions and a profit to the grower, and sold in this country by the ton. We usually sold it as it stood in the field to the basket makers, they cutting and preparing it for manufacturing: competition among the basket makers, has continued to run the price up here to a handsome profit.

TO CORRESPONDENTS.—A series of questions submitted by a "subscriber," of Spencer Co., Ky., will be fully answered in our May number. These, and several other matters of a similar character, are necessarily laid over for want of room in our present number.

HAMMOND'S MOLE DRAIN PLOW.—There will be a public trial of this draining plow at the St. Louis Nursery, on the Olive Street Road, five miles west of St. Louis, on Wednesday, the 11th of April, at 2 o'clock, P. M. The patentee, Mr. Hammond, will be present, and those who are satisfied with the working of the plow, and wish to purchase either territory, or one of the plows, can have an opportunity. All interested in land draining are politely invited to be present.

NEW MAP OF MISSOURI AND ILLINOIS.—Richard Edwards, the enterprising St. Louis publisher has just issued a new map of the above States, with all the latest changes, contemplated railroad routes, &c. We are informed that this is the first map ever published west of the Mississippi river, which is quite creditable to the publisher. The map is valuable to every citizen of Missouri and Illinois. Price $3 00.

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